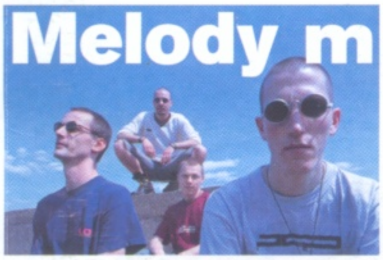
WIN! A £380 Hi-Q PowerStation

The **essential** magazine for Amiga enthusiasts

AMIGA SHOPPER

Issue **53** September 1995 **£3.99**

Melody makers



How to be a successful Amiga-based musician

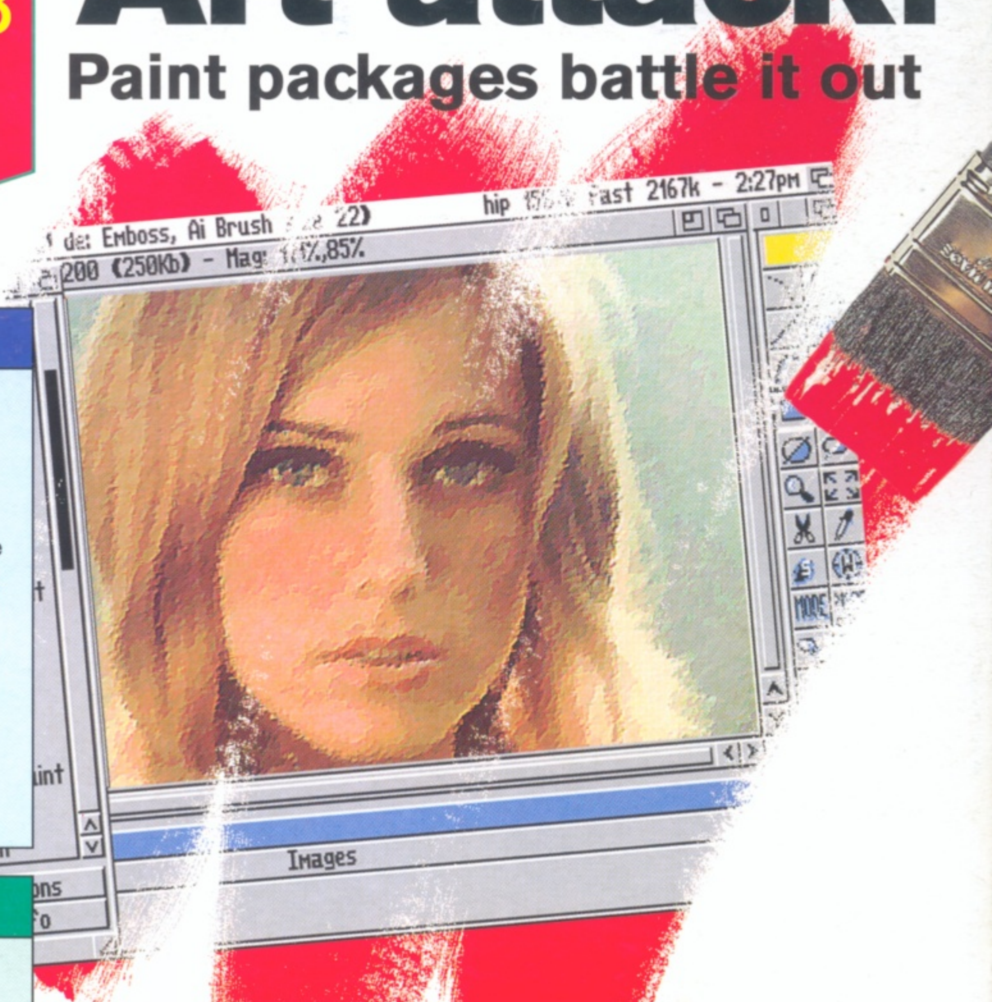
Protext 4.3

Worth £40

We give you the full program. Plus 4Mb of other essential programs

Art attack!

Paint packages battle it out



Shopper**Reviews**

- ProVector 3: the long-awaited upgrade to the excellent structured drawing package is finally here.
- Synchronise sound and visuals with the new ProGrab 2.5 from Gordon Harwoods.
- Mega Mouse Plus: a new rodent from Golden Image with our top 10 tips for your mouse! (You can also find some mouse utilities on this month's ShopperChoice.)
- Datachrome: Make use of datatypes in any program.



- We look at the best dual-speed CD-ROM drive on the market: the excellent Aiwa ACD-300.
- Plus! Loads more CD-ROMs.

Shopper**Tutorials**

Photogenics
Learn how to retouch your images in the penultimate instalment of our image processing tutorial.

Assembler
The final part of our Assembler series deals with the Copper chip, the Blitter and Bitplane hardware.

DICE
How not to write your C program and why style is so important. (The listings are on ShopperChoice.)

Comms
We show you how to set up your server for other Internet users to access.

Exclusive preview! The Siamese System

Could an Amiga-PC multimedia system finally become a reality? Find out on page 38

PLUS! Amiga Answers and Public Domain

From the makers of AMIGA FORMAT

Future Publishing — Your game-free guarantee

Liana

Are you in need of a fast and easy connection between two Amiga's? Liana, the low-cost network solution, is exactly what you want! Just plug it in, install the software, and it runs! Nothing could be easier than that. Liana is the network solution for those with a small budget and big needs. You can even share your hard drives and printers.

- For every (!) Amiga from WB 2.0 on with a free parallel port
- Includes cable
- Includes Commodore's Envoy networking software
- English manual
- automatically reconnection after (re-)booting without new startup
- Every machine usable as server and client

£ 64.95

Picasso II RTG

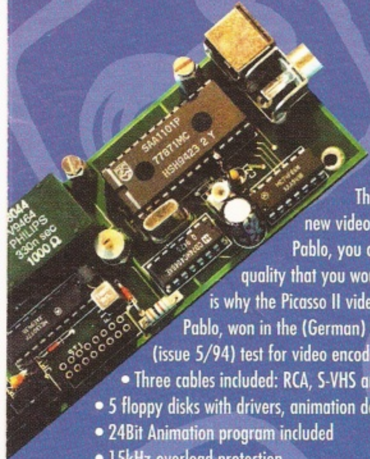


Picasso II RTG, the graphics board all others are measured against:

- Graphics board for all Amiga's with Zorro-Bus - Workbench driver to retarget all programs and WB to the Picasso
- Supports up to 256 colors with WB3.1, even on A2000 and A3000
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- Drivers for most graphic programs such as AdPro, ImageFX, ImageMaster, Real3D
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- Monitor-File compliant with System 2.x or higher, resolution selectable using screenmode requester
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2 MB
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Pablo



The video module, Pablo, expands your Picasso II with two new video outputs. Using the Pablo, you can view your Picasso output on any TV or VCR. All with quality that you would only expect to see from broadcast video encoders. That is why the Picasso II video encoder module, Pablo, won in the (German) magazine 'Amiga Magazin' (issue 5/94) test for video encoders.

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- 24Bit Animation program included
- 15kHz overload protection
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Don't get overwhelmed with the complexity of setting up a network, use our Ariadne Ethernet card that is compatible with all Amigas that have an available Zorro Slot. This card is not only easy to network - it also equipped with 2 additional parallel ports offering multiple network solutions.

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- English manual



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- More than 20 load- and save-modules for animations and pictures (AVI, BMP, DL, FLI, FLC, GIF, IFF, IFF-Anim3/5/7/8/J, JPEG, PCX, Quicktime,...)
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AMIGA SHOPPER

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53 Inside issue

A4000 Towers will be in the shops by the end of August and A1200s will follow hot on their heels...

The big news of the month is that Amiga Technologies is opening a UK office in Maidenhead. Amiga Shopper talked to Jonathan Anderson, an ex-Commodore UK employee who will be running the show. Turn to page 14 to find out what he had to say about the new office and the relaunch of Amigas.

And we have a cracking issue for you this month, first off there's the excellent word processing program Protext 4.3. Over the next two months we're giving away the full package for free. We also have an exclusive-to-Amiga Shopper version of ImageStudio 2.11, the outstanding shareware graphics package. Plus there's six special zones on the disks that are jam-packed with other essential programs and utilities.

If you have an artistic bent but you haven't got a clue which Amiga paint package to choose to make the most of your work, then turn to page 24 where Peter Lee and Gary Whiteley take a look at eight paint programs in our Supertest this month. Each proves exactly how powerful it is as an artistic medium.

And for those people with musical talent but who haven't got a clue how to go about getting a recording company to sit up and take notice, Anna asks the group Alien Race how they went about getting a recording contract. The lads use Amigas to produce their music and they have just released an EP. You too could be successful – if you take note of our top tips.



We also have an exclusive preview of the new developments for the Hi-Q PowerStation, which involve the mysteriously-named Siamese System. And don't miss the competition on page 17. You could win your own PowerStation plus Active 75 speakers.

It seems that Amiga Format are trying to steal all our staff, because this month Anna has followed in Graeme's footsteps and gone off to be their Production Editor. They obviously know quality when they see it!

A big thank you to Anna for keeping us all in line over the past year-and-a-half and for making sure that Amiga Shopper made sense! And welcome to newcomer Nick Harper who takes over from Anna as our Production Editor this month. ■

Sue Grant
Editor

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You can also contact us, or browse through a selection of Amiga articles, tutorials etc. on FutureNet. Point your WWW browser at: http://www.futurenet.co.uk

EDITORIAL Send all press releases, feature submissions and ideas to Sue Grant.
E-mail: sgrant@futurenet.co.uk

COVERDISKS If you have a contribution, commercial or otherwise, that you would like to submit for consideration for the Coverdisks, send it to David Taylor.
E-mail: amshopper@cix.compulink.co.uk

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Turn the page for the contents of issue **53**



Just what is that rat doing in this picture? Find out on page 18.

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AMIGA SHOPPER

ShopperFeatures

ShopperReviews



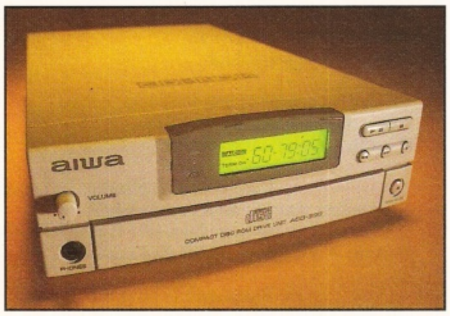
Fancy turning your Amiga into a ticket to musical success? These guys did. See page 18.

ShopperReviews

ShopperServices

ShopperTutorials

ShopperRegulars



The Aiwa ACD-300 – a top CD-ROM player that has a full LCD display and more. See page 46.

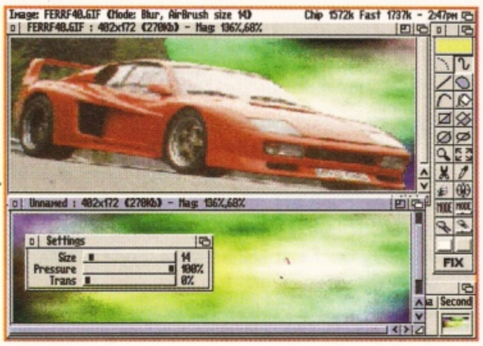


ImageFX is just one of the eight paint packages included in our massive Supertest.



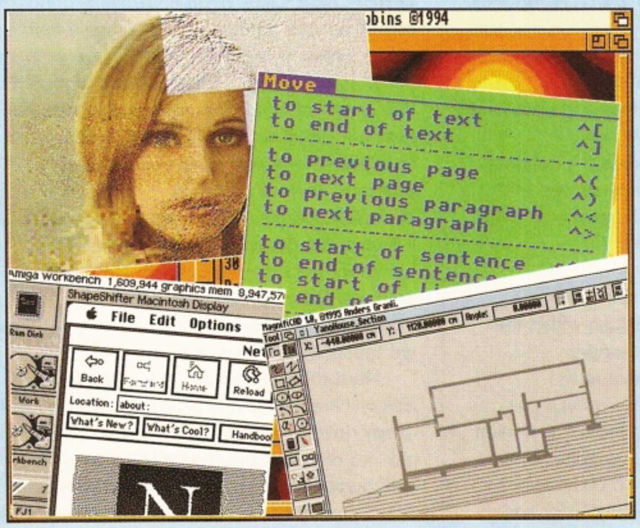
Supertest _24

The Amiga Shopper Supertest is renowned for being the most comprehensive and informative head-to-head review in the Amiga business. Every month we take a good, long look at what we know is of immediate interest to our readers. Previously, we have covered programming languages (AS47), modems (AS48), CD-ROMs (AS49), genlocks (AS50), printers (AS51) and scanners (AS52). This month, **Peter Lee** and **Gary Whiteley** brush off their palette boards and tell you which art package is best-suited to your needs.



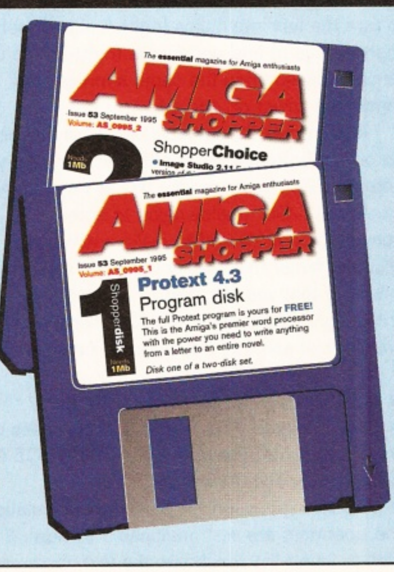
For ease-of-use, Photogenics scores top marks.

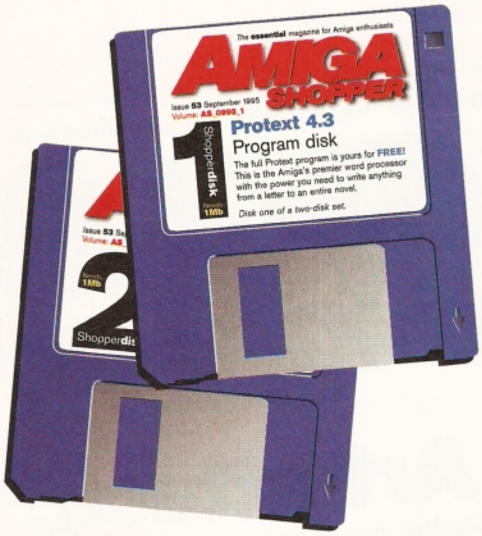
Shopper**Disks** – turn to page 6 for full instructions



We have an excellent couple of Coverdisks for you again this month. First off we are giving away a *full* program in the shape of the incredibly powerful, heavy-duty word processor, Protext 4.3. The full Utilities disk that accompanies Protext will be given away on next month's Coverdisk.

Then we have another 4Mb of programs and utilities crammed on to ShopperChoice, including the brilliant graphics package, ImageStudio 2.11, which has been specially-prepared for Amiga Shopper. If that's not enough, you're sure to find something to keep you happy in the six different zones: application, 3D, utility, technical, creative and programming.





Disks 1&2

This month and next AS is giving away the Amiga's top word processor FREE! Protext 4.3 is all yours, all free, alright? And there's an additional 4Mb of top quality PD and Shareware on the disks. **David Taylor** *introduces AS's best Coverdisks ever.*

For pure text bashing, Protext has always been the Amiga's top program. Most word processors start to require huge resources for heavy work, but not Protext; you can happily knock out tens of thousands of words on a 1Mb system. Add to this the fact that Protext is incredibly powerful, with every option and command that even a professional user needs, and you can begin to see why it reigns supreme.

Protext 4.3 program disk

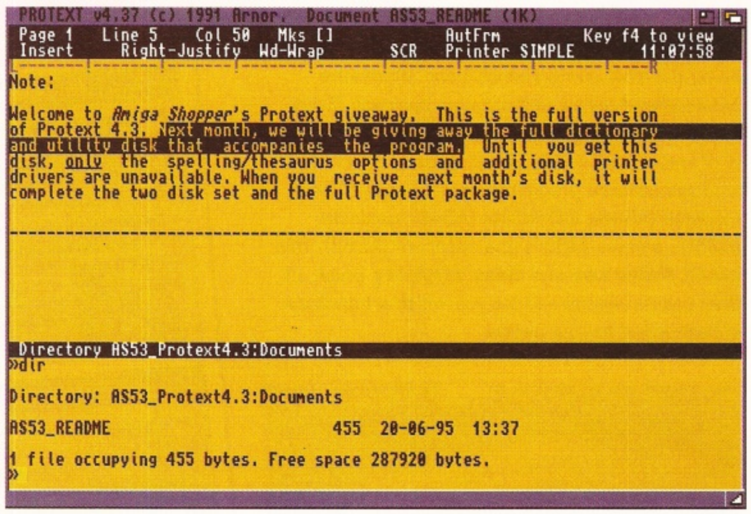
Once you've de-archived the disk, you simply need to boot Protext. If you installed to hard disk, read the last paragraph on this page.

Protext can be manipulated in a variety of ways. The menus are shown and explained on the following pages, so we are going to concentrate on the other areas here.

In any mode, it's important to make use of blocks, so that changes can be made to specific areas of text instead of the whole document. To define a block, click and hold the left mouse button where you want to start the block and drag it down to where you wish to end it, then release the button.

You can use keyboard short-cuts to speed your changes. The most obvious ones to use are to turn the text into italics (right-Amiga i), bold (right-Amiga b) and underlined (right-Amiga u). Repeatedly entering the same short-cut will toggle the effect on and off.

If you press the Escape key, a bar will pop up on the bottom quarter of the screen and you enter the Command mode. This is very much like the Amiga's CLI. It allows you to enter commands quickly and to make a number of changes faster than you could using the menus. It is likely that you will start by using the menus and progress to commands. The following is a brief look at some of the available commands:



Protext 4.3 is the Amiga's top word processor for heavy duty typing. Shown here with a block defined and the command line invoked at the bottom of the screen.

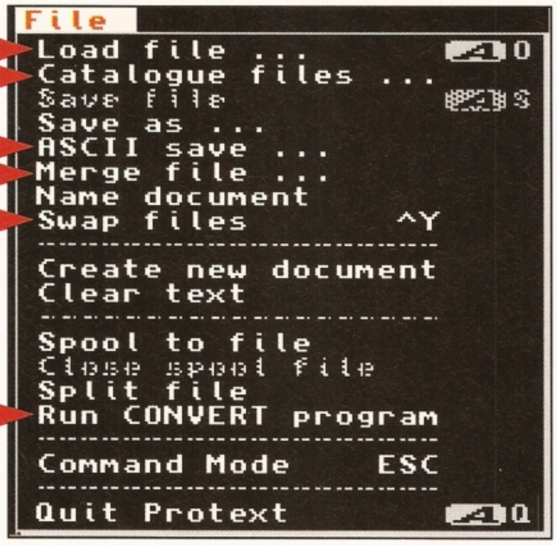
- ACCESS <filename> – set a file to read/write status. This reverses the process of document protection detailed in PROTECT. For example, Access df1:AS.doc.
- CALC <expression> – perform a calculation. The operators are +,-,* (multiply), / (divide). If you wish to insert the result into the text, there are two ways. Pressing the space bar will insert the integer of the result, pressing one of the number keys will insert the result correct to the number of decimal places equivalent to the number key pressed. For example, Calc 4*2.
- CD <pathname> – change the directory to that specified. For example, Cd df1:
- CLEAR – clear the text in memory. For example, Clear.
- COPY <sourcename> <destination name> – copy a file. For example, Copy. df0:documents/AS.doc df1:docs/AS.doc.
- COUNT – count number of words in text. For example, Count.
- COUNTB – count number of words in a specified block. For example, Countb.
- DIR (drive) (path) – list the files and sizes of a specified path. For example, Dir df1:.
- ERASE (drive) (path) <filename> – delete a specified file. Wildcards (*) are accepted – *.* refers to all filenames. Use with care. For example, Erase df0:dave.doc OR erase df0:dave.*.
- FIND <string> – find a string of text occurring after the cursor's position within the document. For example, Find shopper.
- FORMAT – format a document to the margins, rulers and tabs set up. Useful if you have merged an ASCII file into Protext and want it to obey the set margins. For example, Format.
- GOTO (option) <number> – move cursor to line or page in text. The options are 'l' for line and 'p' for page. For example, Goto P2.
- LOAD (path) <filename> – load a file. For example, Load df1:AS.doc.
- MKDIR (path) <dirname> – make a new directory on the specified drive. For example, Mkdir df1:AS.
- QUIT – quits Protext. For example, Quit.
- PROTECT <filename> – protect a document from deletion. This stops you deleting a file by accident. It won't protect the file if the entire disk is re-formatted. Protected files are shown with an asterisk in the file catalogue. For example, Protect df1:AS.doc.
- REPLACE <find-string> <replace-string> – search for and replace words. When a match is found, press 'y' to confirm the change or 'n' to continue searching. To find a string of more than one word, enter it inside quotation marks. For example, Replace AS "Amiga Shopper".
- SAVE <filename> – save the text. For example, Save df1:AS.doc.
- SAVEA <filename> – save text as ASCII. This will save the document in the standard file format that most programs can read. For example, Savea df1:AS.doc.

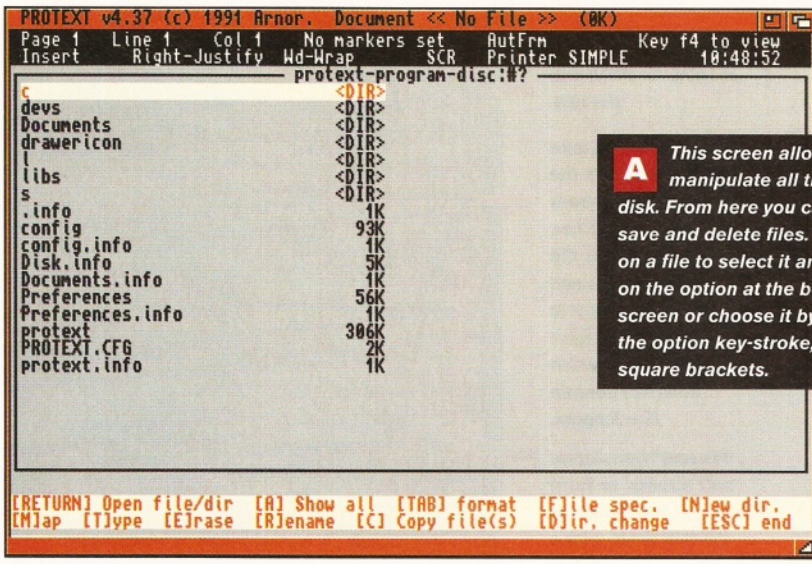
There are many more commands, but these are the most commonly used.

Hard drive users who install to their hard disk will note Protext is configured for use with a floppy drive and requests the Protext disk to be put into df0:. The program's easy-to-use configuration screen can be used to prevent this. If you do have problems, don't worry, we'll be covering it in depth next month.

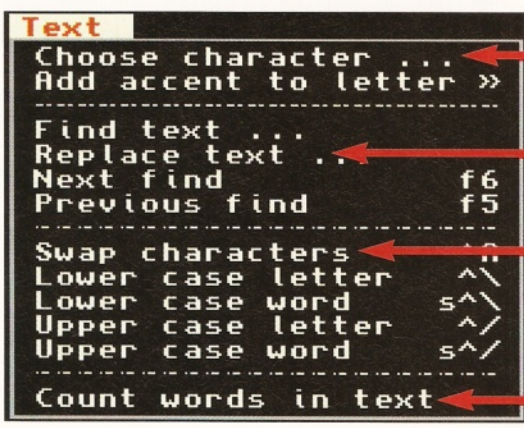
These move you to the selection screen (fig A).

1) Saves the text as pure ASCII rather than Protext format.
2) Inserts a document into the one being edited. Also useful for inserting an ASCII file while keeping the Protext margins.
3) Protext can hold two separate files simultaneously. This swaps between them.
4) This is for converting files from different packages for use in Protext. Unavailable without Utils disk on next month's AS, where it will be explained in greater detail.





A This screen allows you to manipulate all the files on a disk. From here you can load, save and delete files. Click once on a file to select it and then click on the option at the bottom of the screen or choose it by pressing the option key-stroke, shown in square brackets.

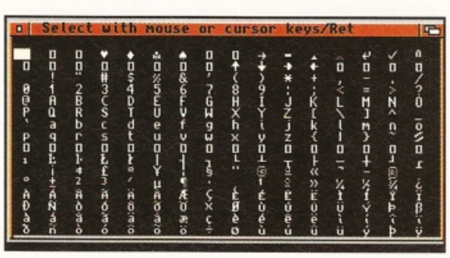


Moves you to the character selection screen (fig B).

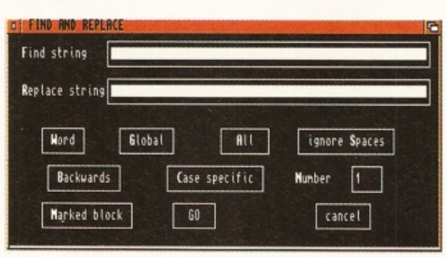
Opens the search and replace requester (fig C).

Reverses the order of adjacent characters. Very useful if you often mis-type, as I od, sorry, do.

Performs a word count on the document. Useful for times when word limits are in operation.



B Clicking on a character will enter it in the text. This is useful for inserting unusual characters, like foreign text, without changing keymaps. Then click on the Close gadget.



C Enter the text you wish to find and its replacement. The options beneath can be selected to define the search. Searches proceed from the cursor's position in the text.

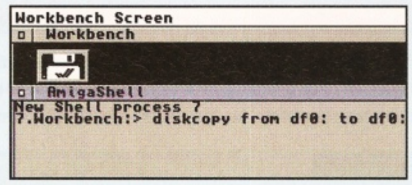
Beginners, look!



Before using either of this month's Coverdisks, please be sure to back them up – just in case. Simply follow the easy instructions below.



1 *Boot up from your Workbench disk or partition, double-click on your Shell icon – to be found in your system drawer.*



2 *If you only have one disk drive, type in the following line and then press return.*

`Diskcopy from DF0: to DF0:`

If you have two drives, place the Coverdisk in DF0: and a blank in DF1:, then type in this line instead.

`Diskcopy from DF0: to DF1:`

3 *Follow the on-screen prompts and remember that the Coverdisk is the source disk and the blank is the destination.*

4 *If you used the two-drive method, remember to rename the copy by clicking on its icon and pressing right-Amiga r.*

5 *If you have two drives, you can also copy the disk from Workbench by dragging the Coverdisk icon over the destination disk's.*

6 *Then boot any of the Coverdisks. However, it is best to boot disk 1 (or the Subs disk if you're a subscriber). This will let you install all the disks to either floppy or hard drive.*

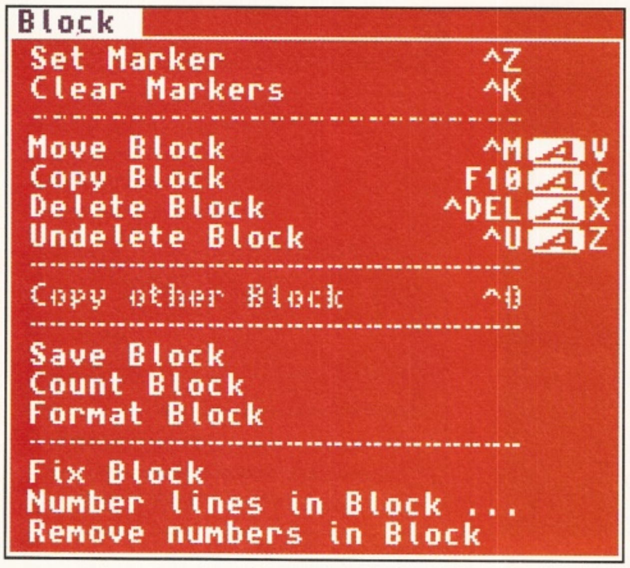
Dodgy disk?

To avoid errors when installing to floppies, ensure that your destination disks are of high quality. If an error occurs, try re-booting and using a different spare disk – the majority of errors are caused by faulty destination disks.

If your Coverdisk absolutely refuses to work and you are certain it is faulty, please return it, along with an S.A.E., to:

Amiga Shopper Coverdisk
(insert the name of the disk),
Discopy Labs Ltd., PO Box 21,
Daventry, NN11 5BU.

▶ 8

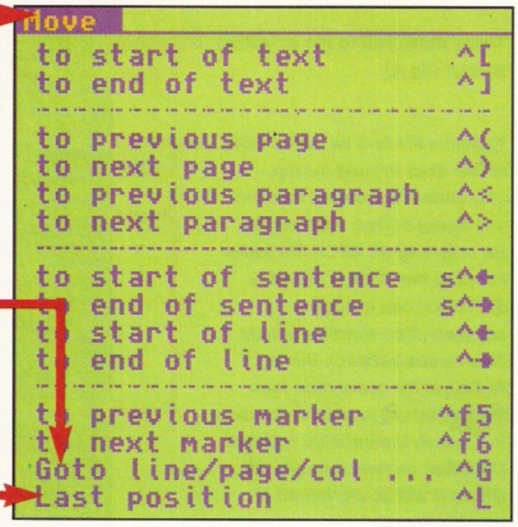


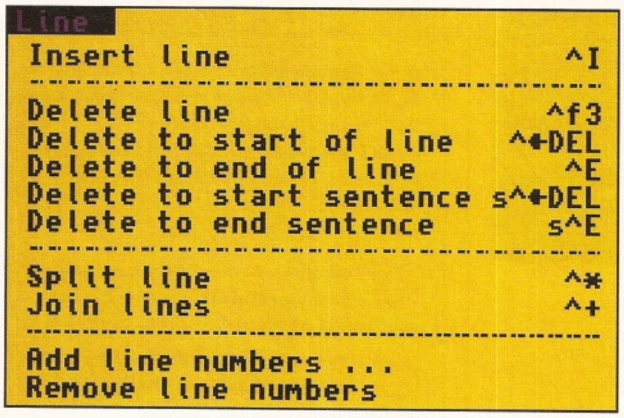
This allows you to perform operations on a defined block of text. To move or copy a block, first define the block, then move the cursor to where you wish the text to go and then select the option.

This menu allows you to jump to specific points in the text. The options should be fairly self-explanatory. The last section jumps you to markers that you have set in the text. Markers are set in the block menu (see left).

Allows you to specify an exact position in the text.

Jumps you to the last place the cursor was before you invoked an option, like "Format text" (see below), which will move the cursor.



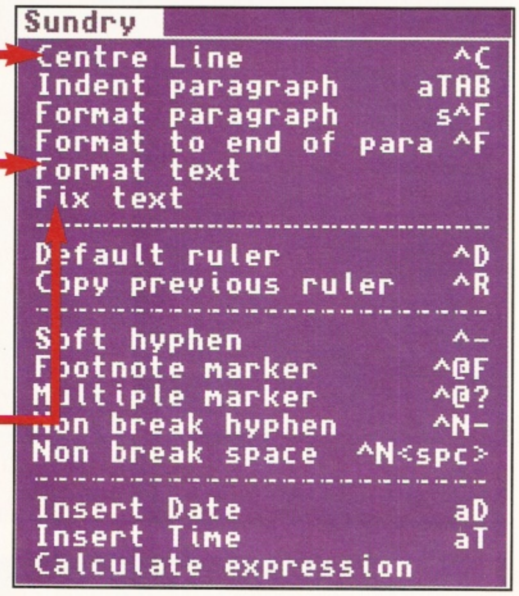


The line menu offers various options that will affect only the current line. "Insert line" will add a blank line. "Add line numbers" will put an appropriate number at the start of each line.

Moves the line to the middle, for titles and the like.

"Format text" will take the text that is in the document and ensure it conforms to the ruler, which defines the length of lines and placement of tabs. It is useful if you insert ASCII text, which does not contain line lengths.

"Fix text" transforms 'soft returns' to 'hard returns', which makes the text fixed, with a return at the end of each line.

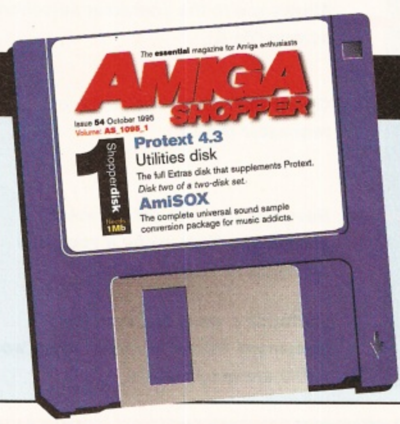


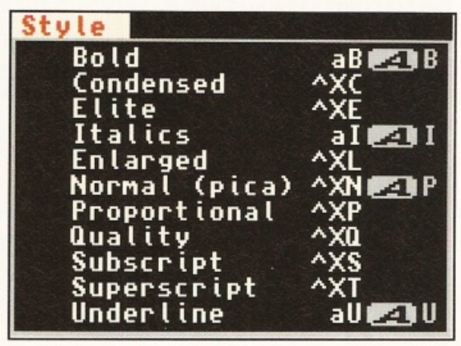
Next month...

Next month's disk will contain the full Utilities disk that accompanies Protext. This will provide the complete dictionary and thesaurus as well as additional printer drivers.

We will be covering these additional options in full next month as well as showing you how to configure Protext to your system and make use of the tutorial files included.

Don't miss the second part of our Protext giveaway. Reserve your copy of AS Issue 54 now! Turn to page 106 for details.





Although Protext only uses one font, you can alter the style. All the types you require are here, but it's quicker if you learn the keyboard short-cuts which are shown next to the options.

The text will appear in the form you choose from the period you select it onwards, until you change it back by selecting the option again or by selecting "Normal".

Blocks of text can be turned into a style by defining a block and then selecting the appropriate style.

Prodata



Prodata, from the creators of Protext, is a powerful database program that will suit Protext users down to the ground.

It operates in much the same way as Protext and can import both standard ASCII and Protext files, so makes a useful accompaniment to this month's AS Coverdisk program. It comes with a full manual that includes easy-to-follow tutorial files to get you started.

If you want to get a copy of Prodata, contact Compo Software. Their address is shown on page 9.

Wow! There's still another 4Mb of Shopper Choice programs to be covered.

▶ 10

AMIGA SHOPPER Protext Bonanza

You've seen our sensational Coverdisk with the complete version of the excellent Protext 4.3, now you can take advantage of our special offer just for Amiga Shopper readers. We're giving you the chance to buy the full Protext manual, or you can upgrade to version 6.61.

The manual ensures you get the full benefit of this amazing program and it costs only £14.99. And if you act before the 31st September 1995, you can upgrade to the full version of Protext 6.61 for just £49, saving £30. Some of the extra features in 6.61 include:

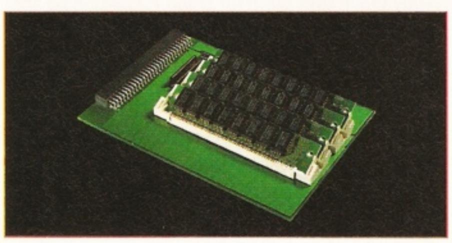
- Support for different fonts and styles
- Many additional commands
- Mail merging ability
- File sorting

The programming team that brought us Protext also produced an excellent database called Prodata, which is ideal for name and address files used in conjunction with Protext's mail merge. You can buy Prodata for only £49.

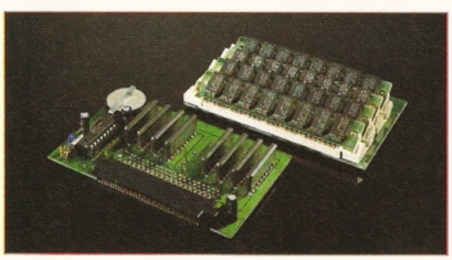
To make the most of Protext 6.61 and many other programs your Amiga should be upgraded to 2Mb. Amiga Shopper has secured some special prices on the most reliable trap door Amiga memory upgrades (see below).



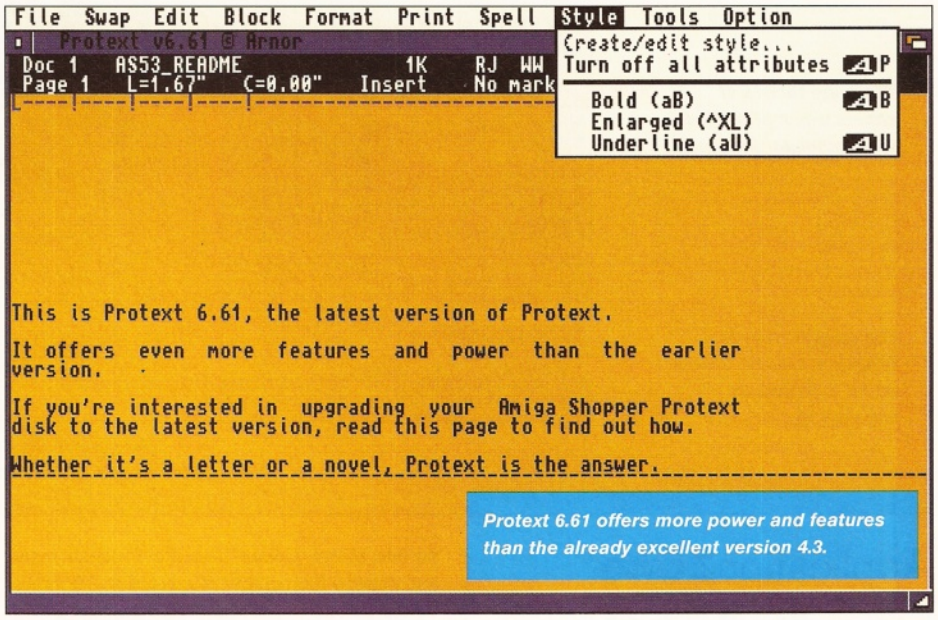
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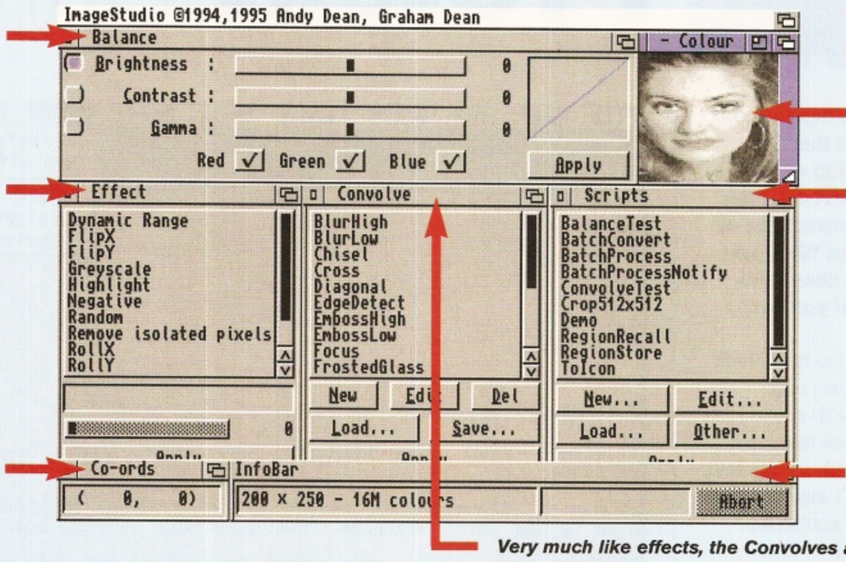
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10

ImageStudio 2.11



Application**Zone**

ImageStudio 2.11

This month's Supertest gathers together all the commercial graphics packages and gives them a thorough going over. For those who can't afford a full price package, but want to get in on the action, ImageStudio is the answer. This shareware package offers a lot of the power of full image processing, but at a fraction of the price. On the disk is a specially prepared version which offers some astounding features.

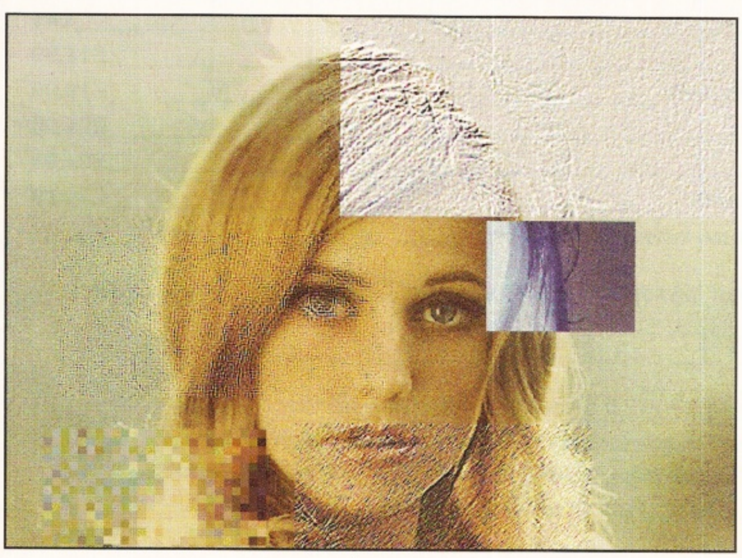
Converting images is just a small part of ImageStudio's power. Not only can it deal with many types of files, from the obvious IFF and JPEG to the more unusual Targa and BMP, but it also offers Effects and Convolves.

When you load an image, it will be previewed in greyscale on the screen. From here, you can start to make alterations. Some changes require a full palette. Don't worry if your images don't contain 24-bit data as ImageStudio can convert them. If you need to do this, select 'Colour' from the 'Process' menu and change the number of colours to 16 million (at the bottom of the requester). You can use any of the features available on this version.

When you select an Effect or Convolve, you must then apply it to the image. The preview screen will give you a rough idea of the change, but you can get a more accurate colour impression by selecting 'View' from the View menu. Should you be unhappy with your changes, the program supports multiple 'Undo', which is accessed from the Edit menu.

To select an area of the picture click and hold the left mouse button on the preview area and then drag it across and release. You can crop or zoom in on this selected box using the menus or even perform an Effect.

In the special annotated diagram above you can see a brief layout of the requesters. The docs give you a more detailed guide including a tutorial. There are also example pictures which, because of space requirements, have had to be placed in the pictures directory in this month's Creative Zone.



A photograph loaded in ImageStudio 2 with several Effects and Convolves applied. There's Emboss, Negative, Pixelise, Diagonal and Blur, amongst others.



ImageStudio 2 with the picture as a preview and the effects added.

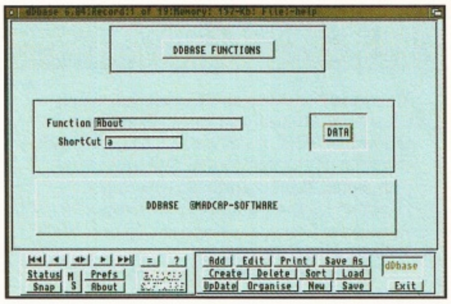
ImageStudio 2 is very easy to use and incredibly useful. This version allows you to use images up to 512x512. There is a PD unregistered version available in different processor speeds that allows only 250x250. Both versions can load larger images, which will be cropped. The full version only costs £10 and can handle images up to 32,000x32,000! See the program for registration details. Thanks to Andy Dean and Graham Dean for arranging this special version of their program for AS readers.

dDBase 6.84

One of the beauties of computers is the speed at which they can sort data. You can enter a load of information and get the beast to sort it out for you. Databases are one of the best ways of doing this and good ones, like dDBase, can even be used to create indexes for pictures,

Shareware notice!

Remember that a number of the programs on these disks are some form of shareware. AS have compiled the disk with the help of the authors, who have received no fee from AS. So, if you keep and use these programs, you *must* register. Some people only want a postcard, so *please* put in the effort. They did when creating the program.



dDBase can be user-defined, but is shown here with one of the example databases.

animations and sounds as well as the more mundane text.

There is a full guide to this program, so explaining the workings is a bit superfluous, but a brief overview may be helpful. You can design your own database, including how many fields you need and the type they should be. Making use of external viewers or players, dDbase can be linked up to display JPEGs and play sound samples. You can even make it view and de-archive Lha files.

The field types are quite extensive. It can be a string, which is any type of data, or required data (without which you can't complete a record – for instance, it wouldn't make sense to have a database of books without having to insert the titles). You can also have date, numeric, text, bbox (text in a bevel box), fbox (text in a flip box), memo or external, which allows the use of the various types described above.

The program can import ASCII, Superbase, Final-Copy, Protext, dBaseII, Mail Merge and AmigaGuide files. It can export to either ASCII or Superbase formats.

The records can be sorted, you can design boxes, read powerpacked files... the list goes on. It's quite clear we're talking about a pretty powerful program. Thankfully the extensive documentation is backed up with example files and tutorials to help you out.

Thanks to Peter Hughes for supplying us and you with such a great program.

3DZone

This month's 3D Zone brings you another collection of objects for Imagine and LightWave. They are separated into the two areas.

Imagine users will find a fax machine object and a full cutlery set, with a knife, two forks and a spoon objects. The fork is also supplied as an IFF brush.

LightWave fans have the Al object, pictured here in full glory, and also the redcycle and wall objects stylised from the film Tron.

All the objects are ready to render. A rather eclectic selection, but one that should give you both useful and amusing objects to add to your collection.

Imagine users may want to read the Disk contributions box.



Shape Shifter 3

Last month we reported on emulators and gave you some information on a Mac emulator that's causing a bit of a stir. At the time, only version 2 was available and caused a few problems. Version 3 is now here (and we mean here!) and offers better support. As we explained last month, this emulator requires ROM images from a real Mac. The procedure is detailed in the guide. You need to be running an 020 processor or higher.

We've heard from several users who are all in rapture over this program, so it seemed only fair that we pass it on. Registration will give you more power and makes this the cheapest way to emulate Macs. You should read last month's feature (AS52), especially concerning legal issues for more details or read the documentation supplied with the program.

MagnifiCAD

This is the first release of a brand new computer-aided design program. The author has obviously been heavily influenced by Digita's

▶ 12

UtilityZone



Online-o-meter

I'm sure that anyone who spends any amount of time using their modem will know how costly it can become.

This program is designed to help you keep track of your spending. Not only can it calculate the cost of the calls itself, but if you use an account such as CIX, where you are charged for on-line time, you can ask it to take this into account with its calculations.

The program can work with different tariffs for when you use a local line or long distance, or if you are using a BT account or Mercury. You can use the warning feature so that you don't overspend and keep to an allocated budget.

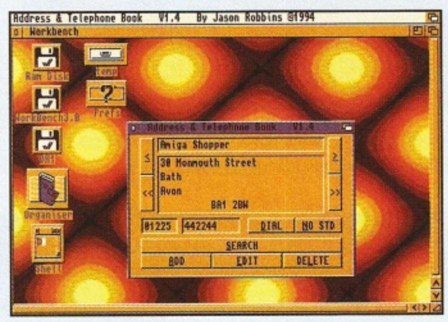


Icon Calender

Here's a very simple idea that works very well. There are lots of clocks available for your Workbench, which display the time and date in a variety of ways.

Icon Calender takes this a step further by putting an icon on to your Workbench which displays the date and month. It's not fancy, but I liked it because of its clarity and simplicity.

This program can be placed in your WBStartup drawer. It will then take the date from a battery backed-up clock every time you boot your Amiga.



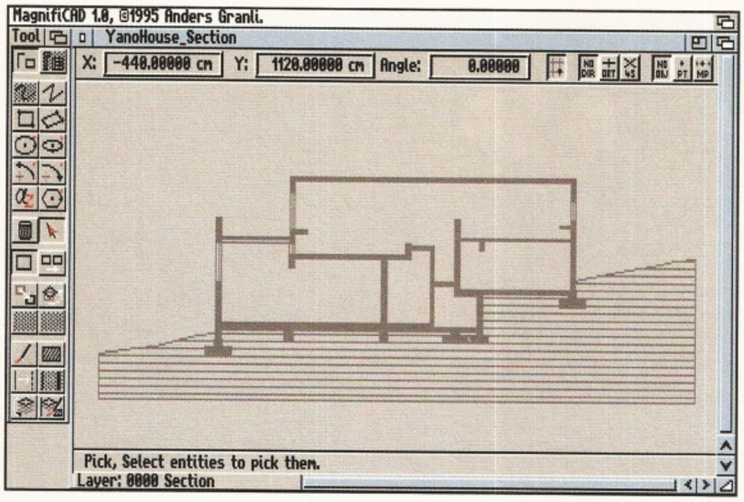
Address Book

Although there is a database program on this month's disk, this ready-made address and phone book is so simple to use that it captured our hearts.

Once loaded you can create your address book by entering all the details including the phone numbers. Then, when you have your database built, it will be accessible at a moment's notice.

You can search for people and re-edit their particulars should they move, for example.

In addition, you can get the program to dial the number for you, by holding the phone close to the speaker. Details are in the docs.



MagnifiCAD will help you design such things as floor plans. Easy-to-use computer aided design.

look – you might be excused for thinking you're looking at a Wordworth add-on.

The system uses four different types of drawing elements: polylines, arcs, text and symbols to help you build up a two dimensional plan. As you'd expect, you're not restricted to drawing each individual line – the program will complete boxes, create ovals, circles and arcs.

The program works very much like a drawing package, except it's specifically written for design purposes and so tries to help you complete your task. To this end, it can become a bit like a dot-to-dot picture, where you join the dots to create the ideal plan. If you don't wish to use the grid marks provided, however, you can turn them off.

The menus allow you to choose a variety of things, from creating and inserting symbols to the thickness and type of line being used



Raindir gives you a much fuller description of the directory's contents and file sizes.

in the plan. Should you wish to do more detailed work, there is a zoom feature to allow you to be more precise.

The program's detailed guide will provide better instructions than can be fitted in here. This program requires an 020 processor or higher. You must make an assign for the program to find the files, eg. assign Magnificad: AS53_Choice3:AS53_Application_Zone3/Magnificad (change as necessary). The author is looking for feedback, so if you'd like to see the program grow, then mail him your suggestions.

Technical**Zone**

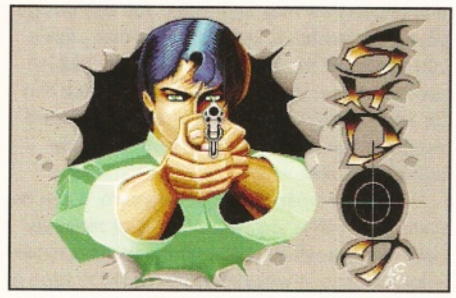
This month's Technical Zone includes some utilities to complement the tips for making the most of your mouse (page 44) as well as many other CLI commands and the BMP datatype for Workbench 3 users. Let's take a look at the programs on offer.

- **CXcommand** is a CLI command that can be used to control and kill commodities. It lets the user destroy these utilities from the Shell without launching Exchange on Workbench.
- If you have a mouse with an active third mouse button, you may find that it is often left unused. **Dcomb** can be placed in your WBStartup drawer to change all that. It makes the third button act as a left double-click, which means that all mouse operations are now available on one single mouse click. You'll soon wonder how you got by without it!

Disk contributions

This month's disks were compiled using files from Aminet and from Walton's Mountain BBS, ☎ 0181 891 5730, and with the help of the authors of the individual programs. The Imagine objects were supplied by the Imagine User Group, 44 Brampton Close, Corringham, Essex, SS17 7NR, ☎ 01375 670036.

If you would like to contribute to a future disk, whether it's a full application, utility, 40K demo, clip art, font, 3D object, or even a module, send it to: David Taylor, Amiga Shopper Coverdisk Contributions, 30 Monmouth Street, Bath, Avon, BA1 2BW. Remember, the smaller it is, the more chance that it will be included.



This month's 40K demo starts with a picture, but soon gets moving with some excellent effects.

- **Knobs**! This command offers extra control over the Amiga. For instance, you can control the length for which post-crash alerts are displayed before re-booting. There are also options to turn off the floppy drive clicks and the Workbench border and much more.
- How about a command that can accelerate your mouse, blank it, perform CLI commands, activate windows, bring them to the front or send them to the back, etc., etc.? How about **MyMouse**? This command is based on the popular Qmouse, but goes much further.
- **Raindir** gives a much better description than the pretty useless dir command. It details the disk, directories and sub-directories as well as sizes. A synopsis is then given at the end.
- **Sermouse** is a program to help you connect a serial (PC) mouse to your Amiga. You'll need a serial adapter but a description of how to make one is included.

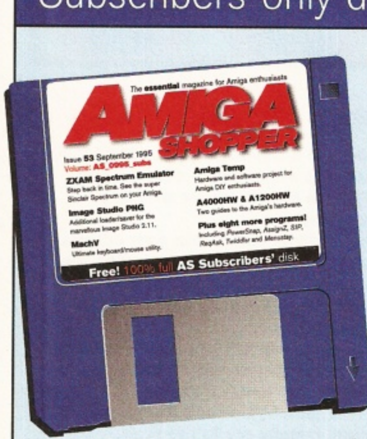
Creative**Zone**

Bringing a little colour to your disk world, this month's Creative Zone contains something for all. The picture section contains all the example pictures that accompany ImageStudio 2, but couldn't fit into that area for reasons of space. There's the usual clip art, chip modules, sound samples and fonts to help you build a library for you to rely on to liven up and personalise your creations. There is also a 40K demo which runs on AGA machines showing some amazing effects.

Programming**Zone**

You can find the tutorial support files for this month's DICE tutorial here. The tutorial itself starts on page 77. ■

Subscribers-only disk



Not only do Subscribers get a full 60p off the cover price of each issue, they also get a third disk every month, absolutely FREE! Always packed with essential goodies, it allows us to give you even more support for your computer.

This month's disk is no exception. It's got ZXAM, the Spectrum emulator, as well as MachV, the powerful keyboard and mouse utility. There's also the additional PNG loader/saver for Image Studio 2, which is on this month's Coverdisks (sorry – there wasn't room for this add-on on the main disks). Amiga Temp is a software/hardware project for DIY fans and AssignZ is the latest and greatest AssignX impersonator. There's two guides for A1200 and A4000 owners, answering all their questions about their machines. All this and another half a dozen utilities.

So, if you're not already a subscriber and are weeping at all that, don't miss out again. Turn to page 56 for details of how to subscribe or phone the hotline on 01225 822511. These disks are only available to subscribers, so don't delay!

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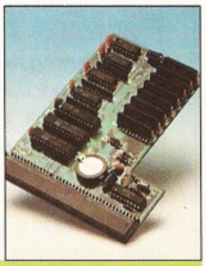
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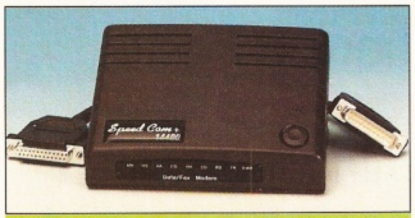
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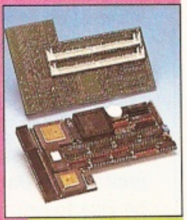
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From M62 junction 17, head towards Bury. We are 50 yards on the right after the third set of traffic lights, opposite Masons pub.

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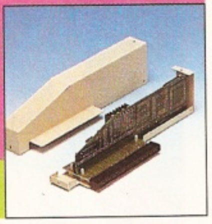


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News

This month in Amiga Shopper's news: Amiga Technologies open a new office in Maidenhead. Plus, you could win a Hi-Q PowerStation. And more!

Amiga Technologies comes home to roost

By the time you read this there may well be a UK office of Amiga Technologies open, just down the road from the old Commodore UK headquarters in Maidenhead. The UK office will be a subsidiary of Amiga Technologies GmbH and will be called Amiga Technologies GmbH (UK). The main purpose of the office will be very similar to the old Commodore UK regime – they will concentrate on selling products to distributors who will then sell on to independent dealers.

Amiga Technologies GmbH (UK) will be headed up by ex-Commodore UK employee Jonathan Anderson – when Amiga Shopper spoke to Mr Anderson, he said that he was still negotiating the lease and organising the office furniture and phones etc., but that they should be up and running by September. Four other ex-Commodore employees will help run the office: John Smith, Bob Burridge, Claire Rudd and Sajjad Majjid.

> "There is some **excellent** news coming, new **innovations** and new products."

According to Mr Anderson, A4000 Towers will be manufactured in the States, although he couldn't tell us exactly where yet. As for A1200s, Mr Anderson said that Amiga Technologies' buying director had just come back from negotiations in France and that there's an 80 per cent chance that A1200s will be manufactured there. He confirmed the rumour that Scotland was under consideration for manufacturing Amigas at one time, but the plant they were looking at "didn't have the capacity" to produce the amount of machines that they wanted, so they were looking at France instead.

Having said last month that the new Amiga logo would be finalised by now, Amiga Technologies still haven't made up their minds between the several designs under consideration. Mr Anderson said that the logo "has to be something really distinctive". He also said that there were several design concepts under consideration by Petro Tyschtschenko and Manfred Schmitt. Apparently, the new pack design is also still under discussion so he couldn't give me any further information. When we asked whether there would be an advertising campaign for the Amiga – like the one that Escom are running for the PC on the TV and in the press at the moment – Mr Anderson said that was "difficult to answer at the moment" because it was all still under consideration.



Jonathan Anderson of Amiga Technologies GmbH (UK).

Mr Anderson confirmed that A4000 Towers will be on sale at the end of August – just before the A1200s which will be in the shops by the second week in September. There will also be a small supply of A1200s with hard drives in the shops by early September too.

Encouragingly, Mr Anderson was very keen to work together with the Amiga magazines and is interested in remaining "close to people who stayed loyal to the product". He also said that "there is some excellent news coming, new innovations and new products". These new products include a Virtual IO headset to plug into an Amiga – there is an NTSC prototype which is of "exceptionally good quality", but Mr Anderson is still waiting to see a PAL version.

Amiga Format reported in their August issue that Gilles Bourdin of Amiga Technologies stated that more of their plans will be revealed at the Internationale Funk Ausstellung on 26th August to 3rd September. The IFA will be held in Berlin and it is an annual show that mainly covers multimedia hardware and software. And apparently, Amiga Technologies's official presentation will be at the Cologne Fair on 10th to 12th November.

Hopefully, we'll be able to bring you a picture of the new logo, and indeed, the fuller picture, next month. There is a phone line for you to call for further information which has been set up by Amiga Technologies. The number is ☎ 01628 770034.

Titbits

Leading question

Do you have a power supply for your Amiga that you don't use or is broken? Maybe you've bought a replacement or upgraded supply. Well, it might not seem worth much to you, but you could be in for a surprise. Hi-Q are offering to exchange the lead from your defunct supply for two CDs worth £30. The leads are in short supply (if you'll excuse the pun) and are needed for the manufacture of Hi-Q's PowerStation. Ring Hi-Q for details ☎ 0181 909 2092.

Picture quality

We are getting hundreds of entries for our picture competition in Amiga Answers, but we can only have one winner every month. The quality of some of the ones that don't win though is so good that we've decided to start using them when we need to use a test picture elsewhere. This seems better than simply getting a sample image and means that you may still get into print, even if you don't win.

Price cut bonanza

Blittersoft have slashed the price of their Picasso II graphics card to £249.95, which includes TVPaint Junior and Main Actor. They are also offering the Picasso II 1Mb version for only £219.95 and TVPaint 2 bundle packs are £369.95 (for the 1Mb version) and £399.95 for the 2Mb version.

Blittersoft will also add the Pablo encoder option to any board for £129.95, or they have a Picasso II multimedia pack available for £399.95. For more information contact Blittersoft on ☎ 01908 261466.

On the beach

If you're after supplies for your printer, then Beach Imaging may be able to help you. They have several new products available. First off there's a hands-free workstation for refilling 51626A deskjet cartridges. The workstation costs £34.50 and comes with two refills. Then there's a refill pack for the BJC600 and a popper kit for 51625A cartridges. For further details contact Beach Imaging Limited on ☎ 0181 850 8344.

Into the future

The fear of credit card fraud over the Internet has prevented many people from ordering goods and services from sites on the .net. To help solve this problem FutureNet, Future Publishing's Internet site has introduced special scrambler software to protect its customers.

FutureNet now offers people the option to encrypt their transactions, so they can feel secure when ordering back issues or subscriptions to Future's wide range of magazines.

You can find Amiga Shopper's pages on FutureNet at http.//www.futurenet.co.uk/computing/amigashopper.html

BBC guide

On the back of their TV series The Net, the BBC have now released a video aimed at beginners to the Internet. A BBC Guide To The Internet costs £18.99 and you can get it from BBC Educational Developments, PO Box 50, Wetherby, West Yorkshire LS23 7EZ. To order by credit card ☎ 01937 840206.

A bit of inspiration

The first newsletter from Inspira Software Club is now available. Members of the club can get discounts off commercial and public domain software and advice from their technical helpline, amongst other things. Membership will set you back just £10 for the first year's subscription. Contact Inspira on ☎ 0181 590 2546.

Scala UK

Whoops! Someone got their typing fingers muddled last month and we quoted Scala UK's number incorrectly. Our apologies to those who telephoned us to get the right number and to everyone else. Two of the numbers were muddled round. The correct number is ☎ 01920 444294.

Oops!

In our review of the Golden Gate 2 board in issue 50 (June 1995) we listed the supplier as Syndesis Corporation. In fact Software Results Enterprises is the sole manufacturer of the GG2 Bus+ board and Eyetech Group Limited is the current authorised European distributor. ☎ 44 0 1642 713 185. We apologise for any inconvenience caused.

Good to be green

Green Disk, the UK's largest disk re-cycling company, have launched a new range of 3.5" HD disks. The company buys obsolete stock, tears down the packages, sending the cards and manuals for re-cycling, while erasing and checking the disks in-house. Dominic King, Green Disk's MD, says "These diskettes are triple tested, by the disk manufacturer, the duplicator and then by us when we format and inspect the disks. We offer people the opportunity of saving money and being world-friendly at the same time." The prices start at 30p per disk – the 200 pack costs £58.75 including VAT and carriage. The disks are available in packs of 10 or 25 and all come pre-labelled. ☎ 01488 685299.



A new kind of CD

A new kind of CD-ROM will be available this Summer. The difference? Well, Cloanto's Personal Suite CD-ROM won't be made up of the usual crop of PD and shareware programs. Instead, Personal Suite will feature top-quality commercial releases.

The titles on the CD are: Personal Paint, Personal Write, Superbase Personal, Personal Fonts Maker 1 and 2, 27 professional Kara fonts, DirDiff and PNG Toolkit. In addition, the CD contains half a gigabyte of pictures, animations, stereograms, stereogram animations, Amiga fonts, printer downloadable fonts and texts. Contact Cloanto on ☎ +39 432 545902.

Cheap connection

Siren Software are offering discounts on their Speedcom range of modems. Prices are: Speedcom+B (14,400 V32 bis) £109.99 (save £10); Speedcom+ET (19,200 V32 Turbo) £139.99 (save £10); and Speedcom+BF (28,800 V34 & VFC) £174.99 (save £25). All modems come with RS232 cable and UK power supply and telephone cable, plus NComm3 software and an Amiga guide to Comms. ☎ 0161 796 3208.



Sister act

AMIGA FORMAT

Following our holistic mandate to bring you everything interesting for the Amiga, the next issue will investigate just where all the new Amiga software is going to come from. Although big games companies still produce Amiga titles, all the really interesting stuff seems to come from small independent companies. Why is this? Well, right at the moment, we don't really know, but we're damn well going to find out by the time the next issue of Amiga Format hits the shelves.

Amiga Format issue 75 is on sale on 3rd August.

Nick Veitch
Editor, Amiga Format



Have you seen the news recently? Blood, tears, human anguish and betrayal, and that's just the Conservative leadership battle. Wouldn't it be fantastic if you could forget all that and choose to either chill out in a perfect Summer Wimbledon-type manner, or burn off all that stress in a frenzy of cathartic mock violence?

Almost miraculously, AMIGA POWER this month offers you the chance to do both. In the great outdoors, we've got reviews of Sensible's long-awaited Sensible Golf and Sid Meier's stunning Colonization, plus a complete and exclusive tennis game on the Coverdisks.

On the aggro front, we've got Gloom, Super Street Fighter II and Behind The Iron Gate reviews, EVERY FACT EVER about Doom games and a tip-top Gloom demo.

AMIGA POWER 52. Out now, and completely unmissable.

Cam Winstanley,
Editor, Amiga Power

Flexi-Link 1.5

The software for the new parallel connector, Flexi-Link, has been updated again. Taking the points raised in Amiga Shopper's review (AS52, 60%) in his stride, the author, Alan Sturgess, has revised the program so that it now loads directly from Workbench. The system is now much more stable, allowing easy access to both machines' drives on either machine. Because of the way the devices appear directly as normal volumes on your Workbench, you can launch applications over the network or even play animations – we tried to play an AGA anim from an A1500 hard drive connected to an A1200 and it worked (allowing for slower transfer over the link) without a hitch. Flexi-Link is also now easy to install to hard drive by simply dragging the icon across. ☎ 01452 306252.

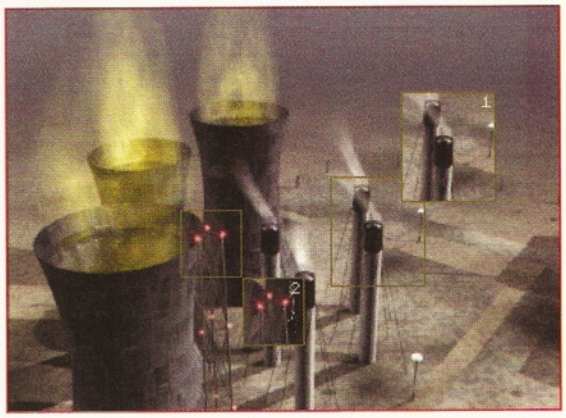


Half of the devices shown here are actually present on a separate Amiga, but accessible with Flexi-Link.

AMOS goes AGA?

Europress Software might have given up supporting the Amiga's favourite programming language, AMOS, but the story doesn't end there. One of the reasons AMOS has fallen behind is because of its inability to support the AGA capabilities. An AGA extension for AMOS has therefore been designed by AMOS enthusiasts. "All the commands are in 256 colours and thanks to some great programming run faster than their 32-colour counterparts," says distributor, Michael Prince. The extension is Licenceware and requires AMOS 1.35/1.36. It is available for £10 from the Amiganuts PD library. Contact on ☎ 01332 273679.

This picture, by Nigel Critten, shows AMOS producing 256-colour images.



Compo

Win a Hi-Q PowerStation

We have an excellent competition for you to enter this month. Just answer the three questions below and you could win your very own Hi-Q PowerStation complete with a built-in CD-ROM drive and upgraded power supply, a CD-ROM disk, a Hi-Soft Squirrel SCSI interface and a set of the brilliant Active 75 speakers.

Amiga Shopper reviewed the PowerStation and the Active 75 speakers in issue 51 (July 1995, see page 47). We awarded the PowerStation a Star buy and 90 per cent, so this is definitely a prize worth having.

Note

If you buy, or have already bought, a PowerStation for yourself and you are lucky enough to win our prize, Hi-Q will be happy to refund your money. So don't be put off from entering our competition.



The questions

1. The PowerStation uses the Squirrel SCSI as an interface. What does SCSI stand for?
2. Paul Nolan is working together with Hi-Q to develop the software for the next stage. What graphics package did Paul create?
3. Fitting a drive to the Hi-Q PowerStation is easier than...

(Complete this sentence in less than 15 words.)

How to enter

Write your answers to the three questions above on a postcard (or the back of a sealed envelope) and send them in to:

Hi-Q PowerStation Competition, Amiga Shopper, 30 Monmouth Street, Bath BA1 2BW.

The closing date for this competition is Tuesday, 22nd August 1995.

Competition rules

1. All entries must be received by Tuesday, 22nd August 1995.
2. The Editor's decision is final.
3. Employees of Future Publishing Limited or Hi-Q aren't allowed to enter this competition.



Ian, Rob, Mark and Simon form the group Alien Race. Below left and throughout this feature are pics of their studio set-up (plus pet rat).



Stars in your eyes?

What do you need to make the leap into the thorny world of computer music? An Amiga, some music software, endless determination and a thorough read-through of **Anna Grenstam's** *music feature...*

When talking to the various Amiga musicians in this feature, I realised that the real beauty of making music on the Amiga is that *anyone* can do it. All you need is an Amiga, some software and a lot of determination – you can create some truly fantastic tracks without being the least bit "musical" in the traditional sense of the word.

I can promise you a great sense of achievement when you sit back and listen to your finished tape: "Wow, did I really do that!". Better still, you can make your own music available to other people and this, at least according to the musicians I interviewed, is "the greatest thrill of all".

Take the four guys pictured on the previous page, Mark, Rob, Simon and Ian, for example. They formed their band, Alien Race, in March this year, produced a demo tape on their Amigas, sent it out to a few record labels, got two(!) recording contracts, released a few EPs and have now started their own record label.

That's a success story, admittedly, but the whole point of this feature is that it really could be you, so what are you waiting for?



"You don't have to be a computer boff or a world-class **musician** to produce computer music."

How did it all start?

We are Rob Graft (a.k.a. 6), Simon Wiltshire (a.k.a. Simon Underground), Mark Lockstone (a.k.a. Asylum Seeker) and Ian Cowen (a.k.a. Blue). Three of us have always been interested in computers and all of us *love* music. As you can tell from our stage names we are all DJs to a greater or lesser extent. Simon is probably the most famous of us – he's DJ-ed all over Europe.

Alien Race was formed one day on an impulse. It seemed like the obvious thing to do – Rob and Mark know a lot about computers, Ian is studying Music and Media at Middlesex University, Simon has got a lot of industry contacts through his business, importing and distributing records from around Europe and the US, and we all spend a lot of our time listening to music, so why not produce it ourselves? That's how it started.

When you are a computer musician, which part is most important – your musical skills, or computing skills?

Basically, it's a bit of both, but you don't have to be a computer boff or a world-class musician to produce computer music – that's the beauty of it. *Anyone* can make brilliant music on a computer, with a bit of determination.

How much did you know about computers versus music when you formed the band?

I can't say I (Rob), Simon and Mark knew a lot about making music at all, but we definitely knew loads about computers. The three of us have been computer crazy since our early teens and have had Amigas for years now.

Ian knew the most of us about how to go about actually making music since he's studying it at the moment, but he certainly didn't know a lot about Amigas.

None of us knew *exactly* how to go about creating the sounds we wanted – we had to teach ourselves the tricks of the trade from manuals and tutorials (Amiga Shopper has been invaluable in that department) and you always learn from your mistakes when experimenting.

What kind of music do you produce – how would you describe it?

Electronic music – that's it. It's not techno, dance, acid, jungle, rave, garage, etc. – we don't want to put that sort of label on it. We try to follow our moods and explore with as many different sounds as possible.

Where do you get your inspiration from?

Spontaneity is the key! If you've got a preconception of what you want to produce, the end result is not always the best. You should just get into it and see what goes. Ideas come from anywhere and anything.

As DJs (Simon is DJ-ing all over Europe, for example) we listen to a lot of different music, anything from ELO to classical music, Pink Floyd to Jimi Hendrix and that way get a lot of inspiration from each other. Also, we *love* making music and that in itself is a great spur.

Your first release, Prime Cuts, was out on 5th June – what's next on the agenda?

We'll do some more with the people we worked with for the Prime Cuts CD in the future. We've

The art of sampling

Sampling is the industry term for when you incorporate a copyright sound recording into your own recording.

Basically, it's an adaptation or arrangement of someone else's work. By adding even the tiniest portion of copyright work, even if you alter it (in timing or speed, for example), to your own recording, you have to get the prior permission of the copyright owner(s).

Most artists are happy to be sampled if asked and the effort and money spent on obtaining clearance is a lot less than having to fight a hefty law-suit at the end of the day.

If you want further advice on sampling, The Sample Clearance team in the Copyright Department at MCPS will be able to help you (☎ 0181 664 4400).

Tim Tucker's top 10 tips

Tim Tucker is the Editor of Total Guitar and has been playing music with numerous bands for 18 years. His big break came in 1991 when the band he was in, Cactus Rain, was signed to 10 Records, a subsidiary of Virgin. Unfortunately, after three singles and one album, they were dropped from the label, but the time was hugely rewarding and gave him a lot of experience of working in a professional environment.

1. Make sure you're set up with the right hardware. The amount of extra hardware you need depends on how far you intend to go. If you want to make use of the Amiga's sampling capabilities (e.g. to add sound effects to a video soundtrack), get a sampling cartridge. You'll also need a good sound source to sample from, ideally a portable CD player, but a cassette walkman will do.

2. You need a MIDI Interface and some sort of MIDI-equipped keyboard and synth.

3. Music software for the Amiga is widespread, but you *should* have a sequencer program. Try a few before buying.

4. Synchronisation is running the music on your Amiga in time with other pieces of equipment. This is essential if you want to record music with vocals and other acoustic instruments, or if you're creating a soundtrack to a video. The industry standard synchronisation method is SMPTE – make sure that all your music software supports it.

5. Read the manual! If you want to make the Amiga really work for you, you must learn the ins and outs of the programs.

6. Decide which area of music you want to focus on – soundtracks to movies, TV shows or games, or simply creating your own commercial music. If you don't know yourself, you're never going to demonstrate to anyone else what it is you have to offer.

7. Create lots of demos. People won't accept you on the basis that you *say* you can do the work – *prove* it to them.

8. Try to work with other people – they can provide extremely valuable perspectives on your work. If you're interested in making music for games or video, try to meet film makers or coders, together with whom you can often produce fantastic packages that will really show what you're capable of.

9. Do as much pre-production work as possible. That means writing all the music at home, sequencing it all and sampling as much as possible, before you go into a professional studio. The reasons for this are obvious – in the studio, time costs money, so it's definitely not the best place to re-write that middle-8 you weren't sure of in the first place.

10. Always check out how other people are working. Listen to the radio (I know, it's hard), watch videos, go to clubs, make sure you're aware of the music techniques that others are using. This is especially important in the world of hi-tech music, where it's essential to keep up with the latest trends.

Alien Race online

Alien Race have just opened an area on the Music Box BBS. You'll find lots of information about the group and all of their record releases listed there. They also intend to include UFO and alien-related stuff! To log on to the Alien Race area call ☎ 01508 538510 or ☎ 01508 538927. Or E-mail: alienrace@musicbox.centron.com

Alien Race have also released an EP called First Encounter EP. Call Underground Music on ☎ 01992 503 284 for details.

▶ 20

MCPS's top 10 tips

MCPS represents many thousands of composers and publishers of music, acting as a centralised collection and distribution agency of mechanical royalties whenever the music is recorded. The following tips were gathered from their booklet On the Right Track. For your free copy and more information on how to become a member, write to them at the address given below.

1. If you submit your demo on a cassette rather than a CD, remember to record on one side of the tape only. Some studios and pressing plants offer a CD-R service which transfers your material from tape on to recordable CD. This can be done as a one-off service for any number of copies.

2. Many of the larger tape duplicators will not make less than 500 copies, although smaller companies will.

3. The presentation of your demo is very important. You may want to consider using some sort of novelty approach. The objective is to be noticed; your demo *has* to stand out from the crowd.

4. Want to get your music played on radio or TV? Find out which programmes use and cover new music. Contact the producer and see if he or she is interested in hearing from you. If so, send in a labelled recording, photographs and a short biography, including details of any gigs. For broadcasting purposes, producers are reluctant to use cassettes – quarter-inch tape, DAT, vinyl or CD are all preferred options.

5. The normal minimum cost of a professionally-made video is probably about £8,000–£10,000. Usually at least half, and possibly all, of the cost of making the video will normally be deducted from your earnings by the record company.

6. If you haven't got that sort of money for a video, there are film and video workshops in most major towns, often founded by the British Film Industry. You may be able to persuade them to help. Alternatively, you could contact the local art college, who often have the technical facilities to make videos.

7. Get a manager! A bad artist with a good manager will achieve a lot more than a good artist with a bad manager. The influence of management on an artist's career is enormous. You may not like the idea of sharing your money with someone else, but you're unlikely even to begin earning unless you employ a manager.

8. How to get that sought-after record deal: if you write your own material, you can approach music publishers who have A&R (Artists and Repertoire) departments. They will often be of great help in getting good-quality demos made and can help you land that recording contract. If you're an artist, you can approach a record company's A&R department *directly*. Unsolicited tapes sent to record companies *rarely* result in a contract. Most companies prefer to see artists live, or hear about them through industry contacts, such as DJs, venue managers, or producers.

9. The process of sampling and the use of samples, no matter how small, require the *prior* permission of the copyright owners of both the original musical work (the writer or publisher) and of the sound recording that is to be used (the 'phonographic' right, usually owned by the record company). Permission for the use of the original musical work can usually be cleared through MCPS. However, clearance for the use of the sound recording has to be sought from the record company.

10. Make sure you get independent legal advice before signing any contract – a relatively modest legal bill at the beginning of your career can often save a lot more expenditure and trouble later on.

recently released another EP with more club-style, dancey music. The next thing we are going to be working on is an EP with HOS (Heidi Of Switzerland – No, I'm not joking, that's really what it's short for) Records. HOS is an umbrella company that 'employs' a group of independent labels and we just started our own record label, Encounter Records, with them. We have also got a couple of live gigs at clubs lined up.

What, in your experience, do recording studios look for in new musicians?

Something fresh with new ideas. And it has to be sellable, of course.

How long did it take before you got your first recording contract?

Well, I guess we are quite lucky, because Simon has got quite a few contacts in the music industry through his company and that helps.

We got the first three tracks that we were happy with done in one weekend, made a tape and took them to a couple of distributors.

Basically, by the end of that week we were offered *two* recording contracts and had the enviable task of trying to work out which one would be the best for us. We have been very lucky so far – it's quite hard to believe really.

Why did you choose Amigas as a platform to work from? What are the pros and cons?

The reason I think the Amiga is so good, especially with OctaMED, is the sampling. If you use any other set-up it's going to cost you quite a bit for a good sampler. With our kit we can sample *anything* – records, vinyl, DAT, etc.



Then there's the truly excellent multitasking, of course. It *really* speeds things up. No other machine can provide such good value for money. We can do everything we want to do on an Amiga, so what's the point in having a PC, Mac, or Atari ST set-up that costs a fortune?

Amigas are superb and cheap... for £200 you can easily go out and buy enough Amiga kit to get started. It's made music accessible for a whole generation of people who otherwise wouldn't dream of producing their own music.

There are lots of people in the industry who are releasing records created on Amigas with a program like OctaMED. If you are creative and use your mind a bit, the Amiga is the ideal tool.

Sadly, there are a few cons as well. What I would really like to see is an Amiga with more audio channels and a 16-bit sound card.

Music on the cheap

If your budget is somewhat limited, don't forget to check out this month's Public Domain section, where Jason Holborn reviews five fine PD music packages: Music2Tab, Excel 1.61, Amiga Music 104, EaglePlayer 1.54 and Chord Directory 2 Professional. Turn to page 84.

Music served on CD

If you read Amiga Shopper regularly, you know we've got a CD-ROM section every month. Then you should also know that we've reviewed various music, sound program and sound sample CDs in the last couple of months.

To refresh your memory, I could mention Terra Sound Library in AS51, The Sound Library and GRX Workshop and The Craft Brothers' A Drop in the Ocean in AS52. (If you missed out on these issues, order your copies by turning to page 104.) Turn to page 46 and you can read this month's reviews of the hot-off-the-press music CDs Makin Musik and Multimedia Toolkit 2.

What set-up have you got?

Two Amiga 1200s – one with 350Mb hard disk and 2Mb RAM, and the other one with 85Mb hard disk and 10Mb RAM. Both run OctaMED v. 6, Datel MIDI I/F and two 8-bit samplers.

We've also got two Roland TB303 basslines, a Roland TR707 drum machine and SH101 synth. Also, a Casio CZ101 synth and CT85 tone bank keyboard.

Added to all that are a Mackie 1202 mixing desk, a Vivid 3D effects unit, an Alesis Midiverb 3 effects unit, a Chorus effects box, a Sony desktop DAT, a Kenwood 302SE amp, several unknown-make monitors and our trusty friend the electric kettle, of course.

What would your dream set-up be?

An Amiga with built-in MIDI and a sampler with at least eight separate audio outputs that is capable of producing 16-bit samples. Also, a lot of analogue synthesisers and reams and reams of keyboards and *anything* that makes a noise.

How has the Commodore saga affected you in the past year or so?

It hasn't really affected us at all – we had our set-up before Commodore went bust. The retailers have also done a good job, because we have always been able to get hold of the accessories, hardware and software that we needed. There is really good support out there for the Amiga. Now, we just wish Escom a lot of luck in pushing the Amiga forward and onward.

Why did you stick with the Amiga?

The Amiga market is a market that is very loyal to its machine. People who read Amiga Shopper should know why we stuck with the Amiga; it's a superb machine – there's nothing else like it.

How do you think the Amiga compares as a music making platform to other machines, such as the ST, Mac and PC?

We've had experience of all those platforms, so I think we've got a pretty good idea. They all do more or less the same thing – when you are in a MIDI-controlled set-up, it doesn't matter what's sending the MIDI messages; it will produce

exactly the same sound. Obviously, on the sampler front it *does* make a difference and sometimes it would be nice to have a 32-bit Power PC and get higher-quality samples. But, as far as the MIDI set-up is concerned, with an Amiga you can have 64 MIDI channels and that's as much as you are ever going to use.

Then there's the value-for-money side to it – the Amiga is ideal for a beginner, because it's wonderful value. If you buy any other machine, there's so many things you have to buy to go with it The ST is the only machine that's in a similar price-range to the Amiga, but the *only* thing the ST has going for it is a built-in MIDI port and don't let any ST-owner tell you differently.

Can anyone produce music on an Amiga?

Well, yes! Anyone can make music full stop. We all started out completely illiterate as far as music packages go and had to teach ourselves all the ins and outs of music making through tutorials in Amiga Shopper. It just takes a bit of hard work and determination.



Which is the most powerful tool at your disposal as musicians?

Us! Our minds and creativity.

Someone told me that the musician's definition of noise is rather like the gardener's definition of a weed: noise is a sound that you don't want, it is the wrong sound in the right place, or the right sound in the wrong place. What is noise for you?

Anything that isn't silence. Noise isn't a dirty word to us. Even weeds flower, don't they? We are into noise – what it boils down to is how you *use* the noise. All noise is good – who could say what is a right and wrong sound anyway? Experiment, experiment...

What would you say to people who frown on computer music as "artificial" and not "real" music at all?

Open your mind! Wake up and have a look around what's going on. It's a new generation music and it would be a shame to miss it. Remember that even bands like the Beatles were once looked upon as long-haired hippies by some sceptics and I'm sure they then put their music down as not being "real" – today the Beatles belong to the All-time Hall of Fame.

It's the same with any new music – people don't understand it, they are not used to it, so they automatically reject it.

People are very narrow-minded about this. If you listen to *anything* in the charts today, it's all done on computers – it really is all computers nowadays, I'm not sure if people realise that. Times will change... hopefully.

Also, whether you use a computer or not, you still need to know about the manipulation of sounds, which ones go together and how to achieve the effect you want. You need as much knowledge about music as you do when playing any other instrument. It's no more artificial than 'traditional' music and it's not cheating – it's just a different way to achieve the sounds you want.

Is there a fundamental difference between making computer music and more 'traditional' music?

Well, there's the obvious... you need a computer and some computer knowledge. Your *computer* is your instrument rather than a violin or guitar and so on. There is also the matter of presenting the music, of course. Traditional music has usually got an icon – some kind of rock star, for example – the musicians behind 'club music' are usually fairly anonymous.

As far as creating – structuring and producing – the music, there isn't a lot of difference. We obviously don't always get the hands-on experience with the instruments – there's far more programming to be done. For example, we are not actually *playing* the drum machine, we are telling it *what* to play.

The main difference is literally the way you go about creating a sound. To keep the drum

MIDI Masters top 10 tips

Matt Jenkins is the man behind MIDI Masters, a new computer-orientated (using Amigas and Ataris) recording studio that started up in Cardiff in May this year. Matt has just released his first recording, called Unplugged, made at the MIDI Masters studio. He is currently setting up a tour of Cardiff and the surrounding areas and he is also a keen tutor of computer music.

"The reason I've chosen computers as a basis to record and teach music is that you don't have to be musically talented to get involved, you just need the ideas and have a love for music. Also, there are no boundaries as far as recording goes; anything is possible, from classical to hard-core punk."

1. The basic set-up needed is any Amiga with at least 2Mb RAM, an 8-bit Amiga sampler, a copy of OctaMED v. 3–6 and/or Music X, sampling software (this will usually come with the sampler, but try and get hold of Audiomaster's sampling software – it's easier to use than most packages), a velocity-sensitive MIDI keyboard and/or sound module, a couple of MIDI leads and a small mixer and you're up and running.

2. Sample things at the highest possible rate, then resample them later to save memory. Sampling straight from the headphone socket of your CD player will give the best quality samples (check out the sample CDs available from Future Music).

3. Keep all your samples filed in various directories on floppy or hard drive to save you searching through all your samples for that favourite drum loop or guitar lick.

4. For quick recording using samples, keep a basic song set-up in a separate directory, i.e. drum kit, bass, piano, etc.

5. Always record your songs in bpm (beats per minute). This is the standard time measure.

6. If you purchase a MIDI keyboard, get one that uses GS (General Standard).

7. Keep back-up copies of all your songs and samples.

8. Compile a mailing list of various companies within the music industry and keep sending them copies of your songs until they have to take notice.

9. Copyright all of your songs before sending them anywhere; this can be done by sending them by recorded delivery to your good self.

10. Keep all your hints and tips to yourself – it's a dog-eat-dog world out there.

Alien Race's golden rules

For writing music

1. Try to be as original as possible (easier said than done, I know). Go in with a clear mind – leave any preconceived ideas of what your music *should* sound like behind.
2. Constantly experiment with new ideas.
3. Use original vocal samples if at all possible.
4. Do a remix (it could be a better end result).
5. Save your music as you go along.
6. Be patient – Rome wasn't built in a day.
7. Buy the best equipment you can afford – it pays off. Always shop around for the best deal, though, and put any future earnings back into the set-up.
8. Never try to write anything when you're not feeling enthusiastic.
9. Drink loads of coffee.
10. If you don't like a tune, waste no more time on it trying to get it 'right'.

For recording your music

1. Record your finished product on DAT (Digital Audio Tape) if possible.
2. Spend at least 30 minutes adjusting all the levels.
3. Keep copies of tracks on as many formats as possible.
4. Always, *always* copyright your material when you've finished.
5. If you hire a studio for a day, make sure you are well prepared and waste no valuable time.
6. Always write down all the details of your tune (i.e. the levels) in case you need to redo it.
7. See how your friends react to your music and listen to any criticism they may have.
8. Don't be afraid to dump something you don't like – *you* have to enjoy it!
9. Keep back-ups of everything!
10. Keep your tracks to a reasonable length.

For selling your music

1. Don't be afraid to sell yourself hard.
2. Send out as many demos as possible, but only to relevant people.
3. Make sure your demo tape only features your best work and keep it well presented.
4. Don't rest on your laurels.
5. Make sure you have permission for any samples you use.
6. Don't get disheartened if you don't get a positive response immediately. Persevere!
7. Again, make sure you have copyrighted your work before letting anyone listen to it.
8. Make sure it really is your music.
9. Make sure your back is covered and always get legal help *before* signing any papers.
10. It's not always what you know – sometimes it's who you know. Visit your target market (such as clubs, stores and radio stations).

22

MIDICraft's top 10 tips

Kevan and Gareth Craft have a background in Media Studies and Physics & Acoustics respectively. They have both been in several bands gigging locally and at university. Their first CD, A Drop In The Ocean, was released in December 1994 and not long ago they took over the publishing of the AM/FM disk-based magazine, now renamed MIDICraft Magazine, from Bjørn A Lynne. In February this year, they also got involved in producing MIDI and Music-X data to accompany the newly-released CD-ROM Weird Science Multimedia Toolkit 2. (Turn to page 46 for David Taylor's review of this brand new CD.)

"There is no doubt that the Amiga is the best computer suited for someone who wants to produce computer music. The Amiga possesses the least expensive and the easiest to use software available and with programs such as Music-X and OctaMED, you'll not only save thousands of pounds, but also make music in weeks, not years."

1. Try different combinations of music making software, because each package offers completely different options for both composition, editing and data manipulation, which can all tie in together in your eventual MIDI and/or sampling compositions

2. Not everybody can afford to buy brand new MIDI synthesiser hardware, so check out the second-hand market which offers some excellent bargains for all sorts of goodies.

3. Read as much as possible on MIDI, sampling and making music on computers. You don't have to buy the books, you can go to your local community library.

4. Contact other Amiga users, perhaps through user groups, and give them the opportunity to listen to your music. If it's modules, then these can be distributed on floppy disk. Alternatively, record your music on to a demo cassette, produce a printed inlay card listing your music and send it off.

5. Try selling your disks, cassettes and/or CDs to established retailers who may be interested in distributing your music for a reasonable price. There's plenty of PD software libraries and CD-ROM distributors who are increasingly becoming interested in computer musicians. Alternatively, try some of the more selected synthesiser music distributor specialists – they might just show an interest if they think your music will sell?

7. Buy the KEMPS Music And Recording Industry Yearbook which will provide you with all the information you need – for hiring musical equipment, recording and duplicating services, recording studios and record labels – a must!

8. Copyright your own music by posting yourself (registered mail) a cassette-copy, enclosing information about the tracks and the dates they were written. Do not open the package and keep it in a safe place to be opened as evidence should some unscrupulous person steal your music, or give it air play without paying you royalties. You can then sue for breach of copyright!

9. Once you've produced some music using your Amiga – and you may have produced a demo cassette or even a CD – then send it to producers and A&R persons at both independent and major record labels. Also, send your music to magazines and the local news media – it's exposure you want and it could be your lucky day.

10. Don't sit back once you've recorded your cassette or CD album – write more new material and go through the motions again until you get noticed! Play your material to anybody and everybody, and don't underestimate the word of mouth – it's a very powerful means of communication!

analogy, if you want a bigger bass drum sound, you hit it a bit harder when you play it. On the computer, you increase the volume, distort the sound, or give it a bit more bass.

Admittedly, you lose a bit of the spontaneity when you have to sit and wait for samples to be loaded in, but, on the other hand, a computer gives you a lot more choice.

It could be argued that every new technology creates new musical opportunities. What technology has created new openings for you?
To get down to the basics... electricity! Then there's the wonderful MIDI! MIDI simply gives you *so* many extra pairs of hands. And the Amiga, of course... before we got going we could hit a keyboard and a drum machine like anyone else, but we couldn't have produced our own music if it wasn't for our Amigas.

Many critics say that there is no such thing as original music anymore; it's all regurgitations, or a hotchpotch of old songs. Any comments?
Well, yes I probably agree with the critics. There is no note that isn't on the scale, no chord structure, or beats that haven't been played; we've heard all the sounds before – everything is a repetition of something else. But with all those regurgitated sounds, you create something original. A musician's interpretation of a particular piece of music will always add that bit of individuality to it which makes it original. In this business, the motto is "Recycle, or die!".



The BBC recently showed a program on the troubles that smaller musicians and composers have when their songs are being blatantly stolen by more famous artists. Is there anything a musician can do to protect him/herself from that happening?
First, become a member of the MCPS!

Second, copyright your music by putting it on a blank tape, clearly labelling the tracks, put it in an envelope and address it to yourself. When you seal the envelope, write the names of the tracks across the back of the seal of the envelope, take it to a post office and get them to stick the post office stamp over the seal and post it to yourself. When it comes back to you, keep it *unopened* in a safe place.

Third, if you get offered a contract, don't get so excited that you stop thinking. Before signing *anything*, get a lawyer to take a look at the contract. Our lawyer is a bit of a music-biz guy and knows all the terminology that we didn't know anything about. He's invaluable.

Any last words of wisdom?
Just that making music should be for your own pleasure. If you are lucky enough to actually get paid for it, look at it as a bonus. You don't *need* to know all the correct musical terminology. or what's the name of a certain note, as long as you think it sounds nice and enjoy what you are doing. Don't hesitate, just *do* it! ■

Ready, steady...

If this feature has whetted your appetite and you are now raring to go and put your own demo tape together, don't race out and buy anything until you have read our music package Supertest next month.

John Kennedy follows up with a definitive head-to-head review of music hardware and software. AS54 is out in the shops on 22th August. Don't miss it!

Useful addresses

● Association of Professional Recording Services Ltd (APRS)
2 Windsor Square, Silver Street, Reading, Berkshire RG1 2TH.
☎ 01734 756218, Fax 01734 756216.
● British Academy of Professional Composers (BASCA)
34 Hanway Street, London W1P 9DE.
Fax: 0171 436 1913.
● Mechanical Copyright Protection Society (MCPS)
Elgar House, 41 Streatham High Road, London SW16 1ER.
☎ 0181 769 4400, Fax: 0181 769 8792.
● MIDICraft Magazine for Amiga Musicians
c/o The Craft Brothers, 12 Mount Road, Halton, Runcorn, Cheshire WA7 2BH.
☎ 01928 563762.
● Midi Masters
c/o Matt Jenkins, 22 Piercefield Place, Roath, Cardiff CF2 1LS.
☎ 01222 254463.
● Musicians Union
60–62 Clapham Road, London SW9 0JJ.
☎ 0171 582 5566.
● Performing Rights Society (PRS)
29–33 Berners Street, London W1P 4AA.
☎ 0171 580 5566.
● The Association of Professional Composers (APC)
(Same address as BASCA.)
● Total Irrelevance Magazine (M.U.G – OctaMED Users Group)
c/o Richard Bannister, 6 Glevum Road, Stratton St. Margaret, Swindon SN3 4AF.
● Umbrella (Association of independent record companies)
PO Box 763, London SE24 9LL.
☎ 0181 960 1871, Fax 0181 969 1694.

Music software and CD distributors

● 17-Bit
1st Floor Offices, 2/8 Market Street, Wakefield, West Yorkshire WF1 1DN.
☎ 01924 366982.
● Epic Marketing
First Floor Offices, 138–139 Victoria Road, Swindon, Wiltshire SN1 3BU.
☎ 01793 490988.
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☎ 01702 466933.
● Seasoft Computing
Unit 3, Martello Enterprise Centre, Courtwisk Lane, Littlehampton, West Sussex BN17 7PA.
☎ 01903 850378.
● Sleepy Hollow Software
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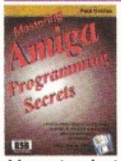
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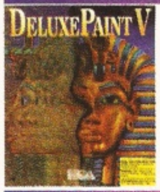
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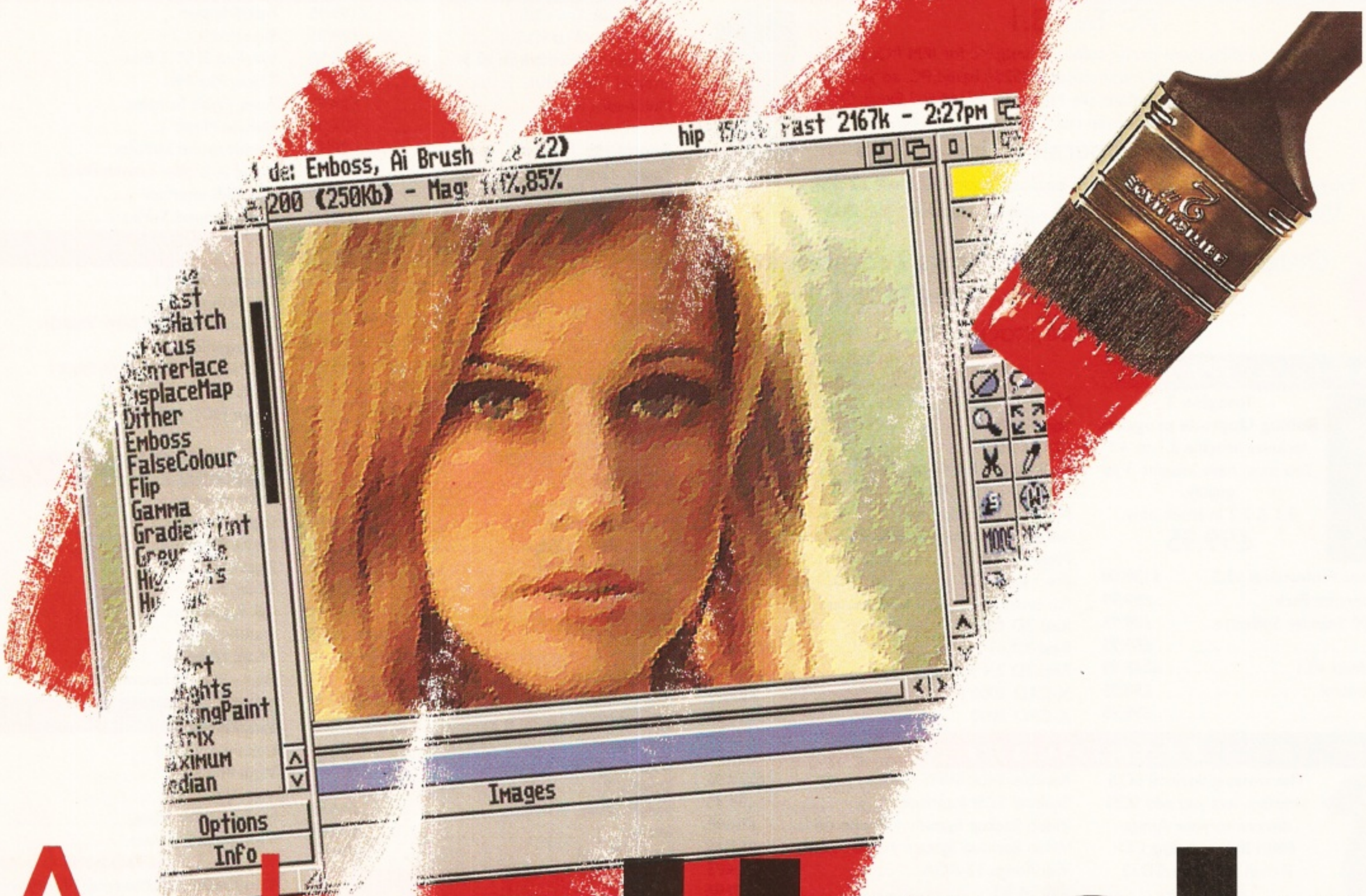
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Art attack

Computer art is not about being good with a brush and palette – it's a whole new medium giving those with vision the power to wield wonders. **Peter Lee** *grabs his mouse and lets the creative force flow from within.*

"If you have the best home graphics computer on the planet you may as well use it for something creative."

Stunning computer graphics are everywhere – on TV, at the movies and in print. In fact, there's no getting away from them – so if you can't beat 'em, join 'em! But how? Dead easy – you've got an Amiga and a world fairly bristling with software to help turn your wildest dreams into reality.

And even if you think you can't draw, new standards are being set in image processing on the Amiga which dismantle conventional artistic barriers and allow you to be creative without using spatial perception, let alone know what it is. (If you don't, look it up in the jargon box!).

Amiga graphics have evolved from simple paint programs, through image processing to hybrids which combine the best of both worlds. Ordinary artists still stick to bitmap imagery, where every stroke is created by hand. OK, they may use an in-built tool such as Filled Circle, but at heart they're carrying on the artistic traditions used in regular mediums. Now these, too, are being simulated on the Amiga.

More adventurous computer dabblers, on the other hand, see the computer's graphics power as just one more tool in their repertoire. Solarise, emboss, distort – you name it; if it adds to the power of the image, they'll use it.

Luckily both sides of the divide are catered for in the wealth of software written for the Amiga. And as we're spoilt for choice, this month we cast an experienced eye at the top packages available.

But first... why bother with graphics anyway? Well, why not? It stands to reason that if you have the best home graphics computer on the planet you may as well use it for something creative. Even the best of games soon fade, but your imagination will never dry up. Using art packages lets you explore your potential in the privacy of your own home, working on techniques using software purpose-designed to assist the wannabe artist.

Even if the only person who sees your work is you, the burst of pleasure at creating something is well worth any effort. You and your Amiga can do it. As Yoda said – "Do or do not... There is no try."

Brilliance

Brilliance is really two programs in one: the standard version works in all non-HAM modes and True Brilliance runs in HAM and can work on 24-bit images. Which version you run depends on your needs, because while non-HAM Brilliance is ideal for ordinary artwork, the True version can save images in broadcast quality with millions of colours.

As an art and animation package, Brilliance is a superb tool for both the pro and amateur. It

has a range of paint options which make drawing a pleasure and the menu structure, while initially a little confusing, soon becomes second nature.

There are none of the pull-down menus associated with other major art packages, instead, just tools which open up a comprehensive array of nested icons. The programmers have included a help function, which names the icon as your cursor hovers over it. The menu hierarchy is innovative and designed to make drawing sessions flow more smoothly and while others have yet to see this system as a way forward – none of the main competitors have adopted it – it is what a true GUI Interface should be like.

An army of drawing mode options is provided, from simple Paint to Tint or Perspective Fill. Again, the abundance of options makes for a confusing hour or so as you battle for control of the software. It's a bit of a cop-out, but you do have to fiddle with settings to work out what effects they have on your drawing. Some options need others to be set and others only work if the correct requirements are met – for instance Perspective Fill will only function if you've set the perspective parameters first (and have an image brush active).

Speaking of custom brushes, several can be stored in a library during a painting session. These can include animation brushes – portions of an animated sequence cut out as a moving brush. For example, you could have a bird flapping its wings in the same spot on several consecutive frames. Cut this out as an Anim brush and you can now tell Brilliance to move the brush from point A to B over seven frames. It will happily do this and on each frame paint the successive brush image from the set of seven. When the animation is played back, the bird flaps its wings as it flies across the screen.

Of course, DPaint has been doing the same thing for years, but it lacks Brilliance's library storage function for brushes and animated brushes, which features thumbnails of the images. Brilliance, like it's rival DPaint, can also morph one brush image into another. This isn't a true, user-defined transformation, but the nearest you'll get this side of dedicated morphing software.

The program takes your starting image, spends a little time working out what colours are common, then tries to shift them over however many frames you've decided to allow it. Sometimes it works, a lot of the time it's crap. But when it does work – for instance changing one line of text to another over a 20-frame run is usually pretty safe – it is wonderful. Sad people might like to morph a chicken brush into an egg brush... I know I did.



The animation section of Brilliance is probably the most complex, but most rewarding aspect of the package. It is well designed, thorough and intuitive (eventually!). Image brushes can be manipulated in 3D space, allowing pseudo perspective effects. Moving images from point A to B is straightforward, because you can paint the brush down at the start, tell Brilliance these are the co-ordinates, then move the brush and do the same for the end point. There's no worrying if the image will disappear off screen, as Brilliance knows where to start and end.

On the way, the brush can spin and tumble in perspective, appear in varying degrees of transparency and pick up speed to mimic momentum. All this is controlled from a numbingly complicated animation control menu. And this, like other complex facets of the program, could well put off the faint-hearted. But like they say, no pain, no gain. Believe me, any frustration the program causes soon evaporates after practice and experimentation.

As far as True Brilliance goes (the HAM slice of things), the software does a marvellous job in difficult circumstances. Like DPaint all the drawing tools are there, along with a palette of 4,096 colours and problems the size of a planet. Despite these, the maladjusted mode does open the way to some quite breathtaking effects of translucency and delicacy.

For the prosecution, we have the fact that HAM can give false-colour fringing, is slow, is a pain to stencil with and gobbles memory. For the defence, the mode gives more colours than you usually need and allows a subtlety missing from standard styles. And this is true of any paint package using HAM. But on balance, I actually prefer working in HAM mode and really seeing what I'm getting, to all the 24-bit power of the likes of Photogenics, where I only get an almost faithful reproduction of the image and only truly see the results on a high-spec Amiga, or a standard PC.

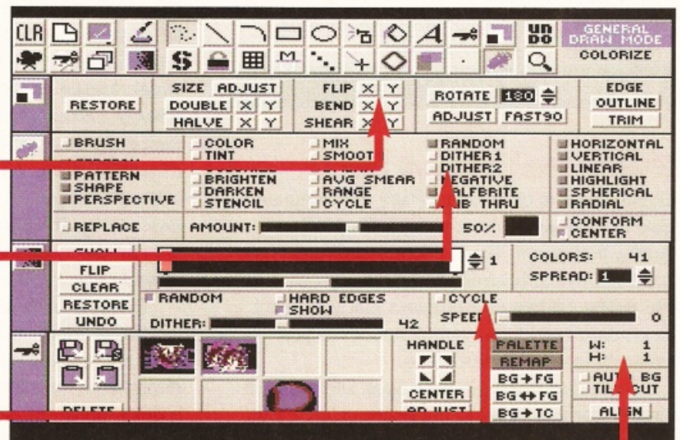
The only shortcoming to this is that HAM drawing packages – DPaint included – just don't have the frills, the special effects which make the 24-bit packages very much more

▶ 26

Jargon busting

ANIM BRUSH – A brush containing a sequence of images cut from an animation, which can be painted on screen consecutively. An Anim Brush is composed of Cells, which is the name for each individual image.
BITMAP – Images whose colour information is stored on a pixel basis (as opposed to VECTOR images, whose data is stored as co-ordinates).
CUSTOM BRUSH – In computer art, either a rectangular or freehand shape cut out from an image. Different from a standard brush, which is one of the drawing shapes pre-programmed into the software.
DIGITISED – An image which has been scanned and turned into binary data in a form displayable by a computer. Typically these will be photographs or illustrations which break copyright laws.
FRINGING – What happens when the Amiga tries to be clever in HAM mode – it can take four pixels to change from one colour to another, so you can get ragged, unattractive edges to images.
FRISKET – See Stencil.
GIF – Graphics format devised by CompuServe to help compress images which need transferring down modem lines. Billions of images exist in GIF format, so it's lucky some Amiga software realises this.
GUI – Graphic User Interface. Having icons and pictures instead of words as menu selections, or in the case of ADPro, not.
HAM – Hold And Modify. A clever Amiga display trick which allows thousands of colours to be blurred on screen at once. See also Fringing.
IFF – A graphics file format beloved of Amiga programmers (and practically nobody else).
JPEG – Graphics format which uses compression techniques to minimize disk storage space. Can lead to image degradation. (No, that doesn't mean dodgy swimsuit pix).
MORPH – A cute plasticine character on Tony Hart's show. Also the transformation of one image into another.
ONION SKINNING – Displaying more than one frame of an animation on screen at once. So called because creating animation on a computer can make you weep...
PCX – Graphics format most commonly used on the PC platform. Some Amiga software can read this too – at last.
SPATIAL PERCEPTION – The ability to make sense of the relative locations and perceived depth of objects. Successful pilots have this. Unsuccessful ones have memorials.
STENCIL – A selection of colours which are protected from being over-written. Same idea as a Frisket.
VIRTUAL MEMORY – RAM (computer memory) is precious and lack of it can limit the effectiveness of programs. By setting aside some disk space as virtual memory, software can use this as workspace and avoid 'Insufficient memory' problems.

If you're mad enough, you can fill the whole screen with nested requesters. We were, and under Brilliance's drawing tool menu are:

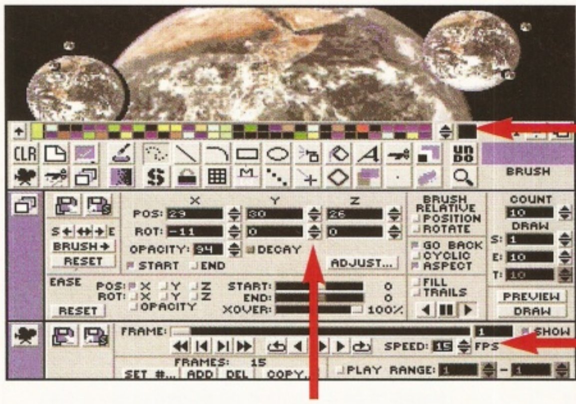


The brush control centre.

The daunting Drawing Modes selection, where effects can be carried out on custom on in-built brush strokes.

Colour control, including definition of ranges, is undertaken here.

Custom brushes can be manipulated, loaded, and saved from here. Note the slots to store your brushes for the current session; these include Anim brushes too.



The main Brilliance drawing tool icons, which include the usual clutch, but there's also a nice lasso clipping feature.

The main animation control panel, where frames can be editied, saved or loaded, and given a global speed.

Control of brushes, regular or animated, is done here. Co-ordinates can be entered automatically from the position where you last painted the brush. To define a path paint your brush as the start, tell Brilliance to work out where that was and do the same for the end location.



Painting effects aren't too special – certainly Brilliance doesn't claim to be an image manipulation package, but you can work some magic by careful use of the drawing modes, as demonstrated here.

attractive to adventurous artists, or ones working with digitised images.

Brilliance

Brilliance was hailed as the DPaint killer on its release and it certainly packed more power (for more money!) than the long-established market leader. It's good – really good and cleverly designed to be as intuitive as possible, in spite of the many options available. Basically a top range art program.

Price: £49.99
Supplier: Emerald Creative Technology
Contact: 0181 715 8866

Verdict: 84%

Personal Paint 6.1

Earlier versions of Personal Paint struck me as lacking a certain je ne sais quoi. Oh yeah, quality, that was it. Times change and now I can lunch on my hat because PPaint has grown up into a nifty full-featured program that you won't be embarrassed to let your mates know you have sitting on your hard drive.

Superficially the program apes DPaint, from the sidebar tool icons to the shortcut keys. But while it falls short of a number of the ultra-sophisticated graphics features of DPaint (brush morphing, say), it soldiers on in its own, competent way to provide a useful selection of painting and image enhancement options. And because it provides a lot of necessary effects missing on a number of other packages, it's a good second buy for any serious computer artist. Or first buy for a green newcomer maybe.

PPaint is probably one of the easiest programs under our scrutiny to come to terms with. Not because there's nothing to it, but because it's nicely designed for the newcomer. It doesn't outshine Brilliance and is well outmatched by DPaint. But look at what you get for what amounts to a budget price.

There is a full range of drawing options – exactly the same as in any other drawing package – freehand shapes, fills, magnification – you know the score. On top of this you get a workable animation editing facility and plenty of image effects which neither Brilliance nor DPaint can match. Some thoughtful programming too – you can set up what's known as Virtual Memory in RAM or on to disk. This is simply a temporary store where PPaint can keep things while it's image processing. The alternative is to have 'no can do' messages if you don't have a Ninja Amiga. I know which I prefer.

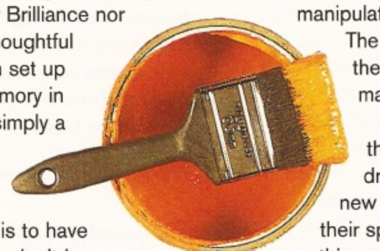


Image effects are really what make PPaint worth the effort. You may not consider that the program has any more to offer in the drawing department than a clutch of other software, but it does tug at the old wallet because of its wide range of features, plus the high fun factor. Fun – still room for that. Like just messing about with pictures, experimenting with special filters for the sake of it and maybe hitting on a knock-out image through chance.

And in which other graphic program can you create those head-numbing random dot stereograms? You know – the ones which leap out of the screen or page in true 3D. Or not.

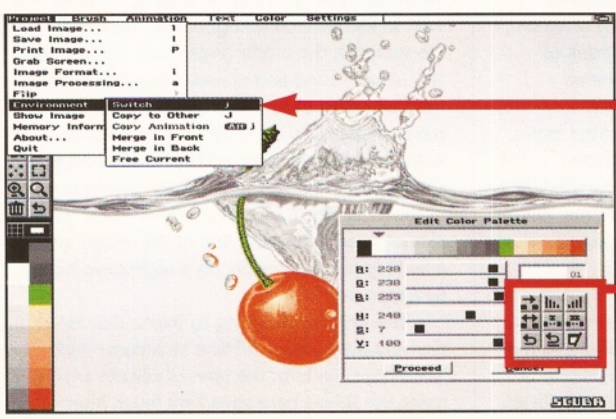
The program can generate the hidden images using random dots, or a pre-defined brush, allowing a more sophisticated way to promote a headache. This is done by creating an image on the alternate screen before invoking a 3D effect on the main. I have to say I mis-spent hours on this – it's worth the price of the package alone!

One feature of the program not mimicked by the majority of graphics software is the capability of having a spare page of a different resolution and mode to the main drawing area. What this means is that you can cut, paste and manipulate differing image formats quickly. The colour control takes into account the differing palettes, letting you re-map brushes or images simply.

Anyone who has found themselves, Homer Simpson-like, drooling over the program's hyped new animation facilities should save their spit – PPaint can't actually create anything which moves. Instead it offers a suite of editing tools for manipulating anims from other sources. In the process it also claims to be able to significantly decrease the size of the anim file when re-saved, so this is a bit of a bonus. (The program can save in both ANIM5 and ANIM7 format, which is widely recognised).

Animations are edited and manipulated from the visual Storyboard. This displays an animation on a frame by frame basis and allows you to add or delete frames, working individually or over ranges you've defined. More usefully you can specify the display time for any frame. This is extremely useful, given that in a program such as DPaint you would have to clumsily duplicate a frame many times to have it displayed longer on screen than the rest.

Animation frame palettes can be altered and while PPaint isn't an animation package (some day?) you can edit any frame in the animation full-screen. This leads to an interesting area, because you can use all of PPaint's effects on individual frames, then re-save the animation. You could compose some pretty flaky effects in an animation which even the originating program – DPaint, Brilliance or whatever – could never dream of. I toss this idea into the pool and hope some of you pick up the ripple.

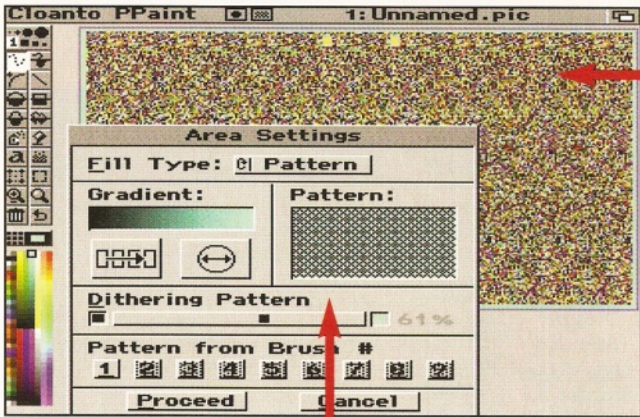


From one of Personal Paint's pull-down menus you can switch to the spare page, which can be of a different resolution and palette to the main drawing page – very handy that.

The colour requester:
a – Copy colour
b – Sort colours
c - Swap colours
d – Create range
e – Undo
f – Hide requester

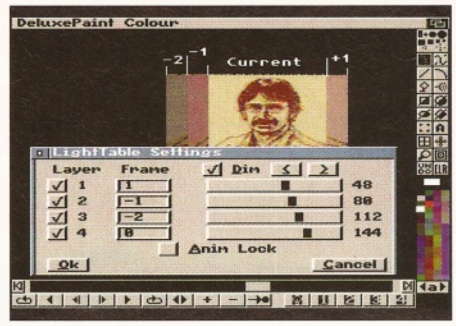
Personal Paint 6.1

A cheerful mid-range graphics program with a lot of frills. Fun to use – check out the Random



Oh, me head! Create brain-damaging random dot stereograms like this at the click of a mouse button. Or better yet, define your own brush to act as the overlay. To create one, you need to have an image in Personal Paint's spare environment – how well things look is a matter of trial and error, but it's brilliant fun.

The Fill requester allows you to define start and end gradient fills, using either a range of tones or an in-built dither gradient, which can be useful in conserving your palette.



The DPaint LightTable in all its glory. Here you can see a frame of animation, with the preceding two and one subsequent frame ghosted on screen. You can actually paint on the current screen now, knowing where objects will be positioned during the animation.

Dot Stereogram option. Plenty of special effects are available for image enhancement and there's a full quota of drawing tools. Not trying to be the king of art packages, it succeeds in providing a quick and trusty tool for serious and fun users.

Price: £49.95
Supplier: Emerald Creative Technology
Contact: 0181 715 8866

Verdict: 82%

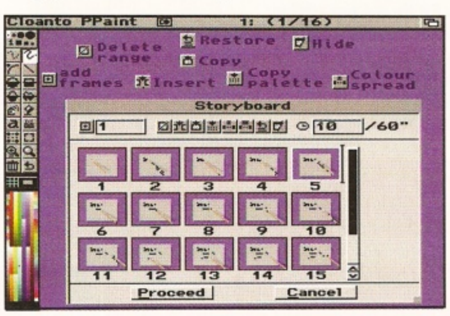
DPaint V

DPaint is a bit like an old sweater – you know it's dated, out of fashion and a bit dull, but you just can't bring yourself to get rid of it. I love it.

It's not as flash as art programs which have sprouted in recent years and it's grown flabby on its own success. But you can't beat it for quick work. Its user interface is about the best around – so much so that it's been mimicked many times. It's not true to say it's a pace-setter anymore, but DPaint's reputation keeps it up with the leaders.

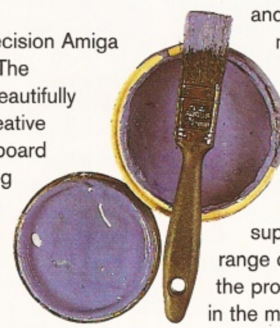
DPaint doggedly sticks to the well-worn path of Amiga graphics with no support for any of the mainstream file formats such as PCX, GIF or JPEG and certainly no serious image enhancement effects. Electronic Arts has pitched its stall as a top-end, totally Amiga, drawing package, but I fear this just isn't going to cut it for users wanting more imaging power.

There is a slight nod in the direction of natural media, duplicating the effects of real-life materials with the inclusion of media types and background textures. In practice these don't really add too much to artistic potential and they seem johnny-come-latelys to what is a mushrooming field among graphic programs. They're hit and miss and troublesome in never quite giving you the look you want. There also seems to be some background image degrading going on too, because once a texture has been applied to an image, the colours aren't true to the ones you started with.



The animation storyboard displays individual frames from an anim and allows you to affect single images or ranges. Personal Paint can't animate, but it does allow you to improve on anims done in the likes of Brilliance or DPaint.

But in terms of standard, precision Amiga art, you can't really fault DPaint. The drawing tools and controls are beautifully constructed to allow free and creative artistic flair. The multitude of keyboard shortcuts was always a big selling point – rewarding the effort they required to learn tenfold by the speed increase they offered. Now you can define your own often-used shortcuts thanks to support for the ARexx standard. This lets you 'record' macros (menu options and the like) and play them back quickly as well as take advantage of the inter program scripting which ARexx has become well-known for.



Animation has progressed with each new version of DPaint and Version V broadens the technique markedly. Provided you have the RAM available you can animate in any mode, imposing effects on the brushes as the program moves them about the screen in pseudo 3D. For instance, you can make a blue rectangle appear as a pane of glass as it moves over objects by setting its translucency beforehand.

New for Version V is enhanced control of animation – from the re-vamped Move requester you can set progressive translucency so a brush can gradually appear or fade out during a sequence. It's also now remarkably simple to edit a brush's status at the start and end of an animation, allowing greater control of rotation and perspective. For example, you can set your start brush in a specific location, then rotate it in 3D space on screen before deciding where it will move to and how it will be rotated on the final frame.

Control of this feature is carried out in the tried, tested and not-too-intuitive DPaint wireframe mode, but is a big improvement on previous animation controls. Another new feature is the ability to move the camera viewpoint – in effect this now allows you to have seamless scrolling backgrounds without tortuous calculations. Or how about creating animations which zoom in or out of an image?

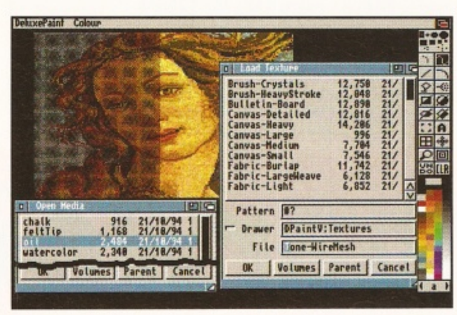
DPaint also features a really clever LightTable, which allows you to see multiple frames of an animation on screen at once, as if each frame were transparent. This is moderately useful in positioning moveable items in a sequence because you can see previous and future frames at the same time. In the movie industry, this is called Onion Skinning. DPaint V improves on its predecessor with some fine tuning of just what you can see onion skinned and how transparent it is.

As mentioned, like other major graphic packages, DPaint supports the ARexx standard and the range of commands which can be passed to the program is astounding. The example given in the manual mentions recording the mouse movements to draw your signature, then playing it back whenever you invoke the macro. The simple structure adopted by Electronic Arts means you don't have to be an expert to use ARexx, which is just as well! Again, the tremendous manual gives the rudiments of the system, with advice on how to progress further in the field. Personally I think I'll stick to drawing.

DPaint V

Eagerly awaited fifth-generation of Electronic Arts' prime art program. The main thing buoying

29



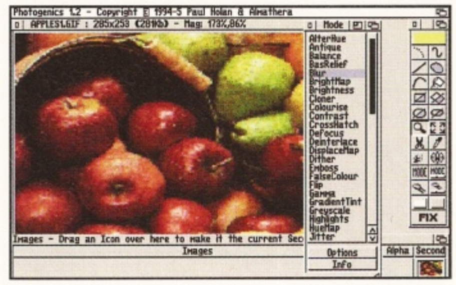
Textures and Media, two newies for DPaintV. They do work, but not that convincingly. The Textures especially tend to degrade the original image. On the right are some of the effects you can simulate; the image of Venus has had wire mesh pushed into her face, for some reason. There isn't much media to work with, but it does spice up the program a little.



The image itself has been cut out as a brush and painted down with a rough paper texture – textures are available from DPaint V's Effect menu.

The globes were created by wrapping the image on to a filled circle and given 50% translucency before being painted.

In this composite you can see the palette requester showing the mixing area, where you can blend in different hues until you get the right one for the job.



Photogenics is only superficially like ADPro in its menu selections – here the Modes window lists some of the very powerful effects available. The image, stored in a 24-bit buffer, has just been blurred to soft-focus it.

up DPaint is its heritage. Almost every Amiga artist has used this software from day 1, so the layout and features of re-vamps come as second nature. It's simple to use and has in-built animation controls, but the wish list on each new version grows longer as EA fail to address today's needs.

Price: £69.99
Supplier: Emerald Creative Technology
Contact: 0181 715 8866

Verdict: 80%

Photogenics 1.2

A real artist's tool – brush strokes, graininess and watercolour freshness are all here, with none of the smell of turps or messy brushes. Photogenics has features found only on 'professionally' priced packages, usually aimed at higher spec machines than the 1200.

In a similar way to ADPro, the program uses windowed menus a lot, but also has a clever toolbox so you get the best of both worlds. Getting to grips with the many options available provides a lengthy learning curve and there are some fiddly concepts to work around – having text loaded into separate buffers instead of directly on to the working screen is one.

But it really is a cost-effective approach to using natural mediums on a computer, a problem which few programmers have the courage to address. The downside of this is on the standard 1200 is that while the software is working in millions of colours in 24-bit mode, what you see in your image window is a paltry representation of this.

I was quite stunned to work on a chunky, ragged image, then transfer it to a 24-bit system and see how great it actually did look. This is little comfort, though, because editing to pixel accuracy isn't possible given the degraded display ordinary users have to work in.

Nevertheless, you get a fair idea of what the image will look like, especially in terms of the painting modes. For example, using a broad brush in Watercolour mode gives a really satisfying sense of actually painting with a dilute colour on screen. On a standard A1200 some techniques can seem counter productive; for instance, you may want a fluid, grainy chalk stroke across an image, but your momentum is lost while you wait for the software to catch up to where your mouse pointer has been.

That said, you can't match the versatility of the program on the Amiga. The painting effects include chalk, pastels, crayon, pencils and felt-tip pens. Each is adaptable to your needs in terms of brush size, pressure and transparency. This means, for example, that you can define a pencil to behave as if it were hard or soft, thick or thin. Or you could define a broad swathe of pastel colour with a single stroke, or duplicate the effect of using it on a thin, hard edge.

Besides this glorious finesse comes the image processing effects. These can be used to manipulate entire screens, or user-defined areas. Tinting a black and white face, for instance, is just a matter of selecting the right colour and drawing a freehand filled shape around the area to be affected.



And like every other option in the program, the effect can be Undone, leading the way to some safe experimentation.

Included in the effects are Antique – which colours the image with a golden, glowing range of colours. You can sharpen or blur portions of an image, or turn it into Line Art.

RubThru is one of the most impressive modes available and the key to achieving the combination of images. Bear in mind you can load in graphics from a wide range of formats – from JPEG, GIF, OpalVision and every IFF mode under the sun – and then, thanks to the power of 24-bit manipulation, combine them – regardless of their colour palette.

The way the program actually does this is pretty confusing, having secondary image screens called Alpha channels which have to be loaded with the alternate image. But it works very well and there is a great Undo feature to fall back on when things get hairy.

New for this latest release is a Distort tool, which will kind of morph a circular area of the image in a specific direction. This is fine for frivolous use – giving people bug-eyes or enlarging the heads of loved ones, but you have to question why room was found for it on the toolbar when you still have to use a pull-down menu to Compose pictures – one of the most-used functions for many people I would have thought.

Photogenics 1.2

True colour painting program which mimics traditional art mediums. If you want a pencil line, watercolour stroke or felt-pen doodle, this program offers it. Fine assortment of drawing techniques is enhanced by superb special effects to help combine images from multiple sources and resolutions. Slow at times on an A1200, but cracking value and results.

Price: £49.95
Supplier: Almathera
Contact: 0181 687 0040

Verdict: 88%

ImageFX 2.1

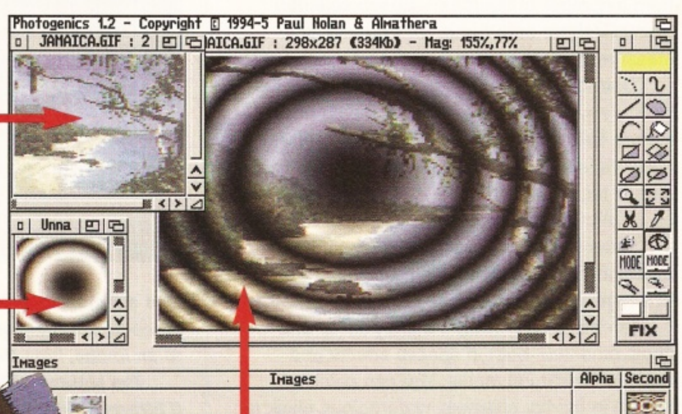
It's as if ADPro and ImageFX came to a fork in the road one day and both decided to go different ways. Or rather, ADPro kept to the straight and narrow while FX beat its way

▶ 30

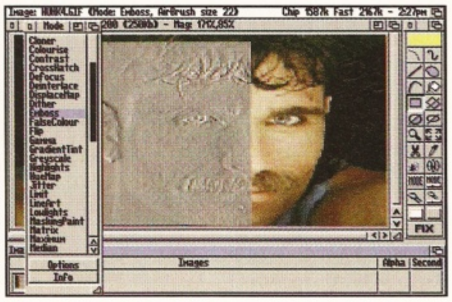
A special effect in a matter of minutes. The initial image of Jamaica is loaded into a buffer and a secondary image created by Photogenics itself.

This is the Wave loader and can be set to give various permutations on the theme. Once created it was placed into the Secondary slot at the bottom of the display screen.





By selecting the Rub Texture mode, the secondary picture imposes its structure on the main image, creating the enigmatic picture shown here, with a ripple running through the scene.

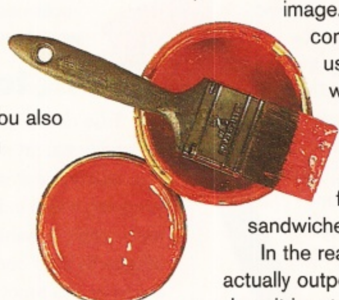


Here, half an image has had the Emboss mode worked on it, using Photogenic's filled rectangle tool. If you make a mistake it's easy to Undo it, or try another effect on the same area. Only when you click the Fix button are changes fixed.

through the brush into newer, more exciting world's of artistic magic.

Why? Because FX has evolved from a straightforward image enhancement tool with a few gratuitous drawing utilities, to a superb drawing and effects program. The leap from earlier versions to 2.1 has been major and the aim to create an all-rounder in image enhancement is pretty close to the mark.

The User Interface is a little like Brilliance's – a seemingly small selection explodes into multiple choice questions, but at least it's more intuitive than even ADPro's re-styled front end. You also have the benefit of previewing effects before carrying them out – a real asset when some can take a good few cups of tea to compute.

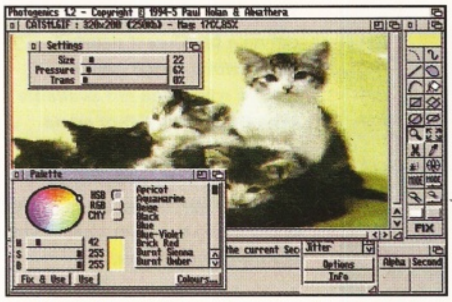


Like Personal Paint, FX boasts user-definable virtual memory management, which enables larger images to be worked on than your supply of RAM might allow (however you do need a minimum 2Mb of RAM to use FX in the first place).

The program can read the whole gamut of image types, including GIF, PCX, JPEG, the good old C64 Koala format and the high-power Video Toaster Framestore. And a batch processing feature has been added, via ARexx, which enables sequential images to be processed automatically. Direct image grabbing from a number of sources – Epson scanner, FrameGrabber and V-Lab, for example, is a measure of how professional the package is.

User control over the software is limitless. Hardly any function escapes the hands-on feature beloved of artists. In fact there are so many variables to manipulate you do have to have a technical approach to imaging as well as an artistic leaning, more so than any of the other programs under scrutiny. But I guess that's because of the sheer thumping power of ImageFX.

On the artistic side, the program is well complemented, both in special effects and support for natural media. You can paint on screen in felt-tip, charcoal, watercolour, chalk or crayon. Each has a profile you can set. For instance, you can set the amount of charcoal laid on the page through its penetration setting – it could be a light swatch, or a heavy bold



You can either select a drawing colour from a list of pre-sets, or edit your own based on the colour wheel. Note the Brush Settings requester at the top of the screen allowing you precise control of how much colour Photogenic's uses.

stroke. Watercolour is particularly effective, allowing you to simulate the dilution of the colour as the stroke progresses.

Anyone used to the brash computer techniques of Personal Paint or DPaint will be stunned to be working in the kind of realistic medium offered by ImageFX or Photogenics.

Like Photogenics, ImageFX has an Alpha channel – a buffer holding an alternate image, which can be made to interact with the primary image. However FX adopts a different concept – the Alpha channel can be used as a variable density frisket while the secondary image is held in the Spare buffer – imagine it as a three-layered effect – at the back the secondary image, at the front the main image, with the Alpha sandwiched between.

In the realm of image manipulation, FX actually outperforms ADPro, and what's more it does it in a totally graphic way. The range of options open to standard Amiga owners (without the benefit of accelerators or specialised graphic hardware) shames ADPro. OK, it may take time to compute and render and effect, but who cares? I'd rather wait five minutes for a super lens flare to be drawn than not have one at all.

The fully interactive nature of the software puts you in direct control – among the more precise and very useful options for manipulating



Two effects shown here: top left is the Whirl, a splendid creation which can put a fluid ripple on to an image, here the surfer on the right.

The Lightning Bolt is one of the many nice, if bizarre, additions you can make in ImageFX. You can play God and define the bolt to exacting specifications. The preview window gives a good idea of the effect, which makes the original image sizzle with power.

digitised pictures is the Pantograph feature. This allows you to clone areas of an image, so for example, you can invisibly remove unwanted portions by copying good areas over the bad.

A variety of special effect filters can enhance (or ruin!) your work; and the great thing is you can preview the results on a thumbnail image before committing the program to carry out the work. Nowadays it's standard practice to have sharpen and blur effects and ImageFX also includes edge detection in several styles and motion blur. Users can also define their own convolve filters.

ImageFX is bundled with CineMorph, a stand-alone utility which creates great-looking morphs, either as single images or as Anims. You can transform one image into another, or just play tricks with a solitary picture. The amount of control the program gives is extensive and like Personal Paint's stereograms can give endless pleasure purely on a fun-to-do basis.

The manual even out-performs DPaint V for clarity and examples – it is bursting with exploded diagrams and schematics to make the admittedly difficult concept of image manipulation seem understandable. To round off the package there is access to ARexx scripts through what are called Hooks, which can manipulate images automatically. Particularly useful is the JPEG info script which graphically



This composite shows how a texture, in this case snakeskin, can affect an image, here the slinky Sherilyn Fenn. You can define the depth of the texture as well as the light source. Note the main control panel – Brilliance is the only other art package to hide so much under an unsuspecting exterior.



One of the many user-definable special effects is Spherize, shown in this composite. The main control window allows fine-tuning of the effect while the mini-preview screen can cut a lot of wasted time by letting you view an effect before committing to it. The hot-spot effect is a nice feature, which gives an almost ray-traced feel to the work. However, the effect does take a considerable time to execute.

displays the storage/degradation factors for a particular compression setting.

ImageFX 2.1

Top-rated image processor and graphics tool which uses a friendly front-end to carry out some powerhouse special effects. Its preview mode speeds up work and it boasts innumerable features which ADPro can't match. Highly controllable and like ADPro, works on true colour 24-bit images without you having to sell a kidney to get a graphics board. In other words, truly the dogs'.

Price: RRP £249.99 (check for promo offers)
Supplier: Silica
Contact: 0181 309 1111

Verdict: 94% Star buy

Art Department Professional 2.5

A true workhorse among image processing tools, AdPro is a serious piece of coding. It isn't a paint program, so unless you have some kind of image to start with, it'll be about as welcome as a teetotaller on a brewery outing. Not that I've anything against temperance, it just isn't high on my list of things to get around to.

Most examples you see in the press touting the virtues of the software show digitised images – and that's the prime areas where it scores. You can fiddle with your own images – turning a bitmap painting into some form of bas-relief, or make your artwork look like Acid House decor. But these are trivial flea-bites for a program which can swallow 24-bit GIF scans, chew them up and spit them out as profoundly beautiful rendered IFF screens.

But what, you will be asking yourself, is so good about a program which doesn't even let you draw on it? Putting aside the special effects and image enhancement features for a mo', it opens the door to the wealth of images which already exist in computerland. So what if someone has created a ray-traced image on the PC in 3D Studio (a piece of software which costs as much as around three A1200s), if it's saved in one of the regular formats used by PCs, then you can load it into ADPro, convert it to a DPaint-friendly image and use it yourself with graphics software you're familiar with. Think of the savings!

And likewise, you can share your stunning images with the rest of the computing world by converting it into as many formats as you like. To use a loose analogy, it's like every computer user being able to read in ASCII text – ADPro broadens your horizons way past the Commodore logo.



ADPro used to boast one of the most unlovely interfaces this side of a ZX81. It was dire – a static push-button affair without a shred of pizzazz. Now, though, it slips neatly into the professional-looking Workbench 2 mould and is much friendlier with its relocatable windows and often-used pre-set commands. For example, you can set buttons to load or save in specific formats. There are still no graphic icons, just lists and buttons, but this Spartan approach is soon mastered and sessions move along quickly, even if they are rather dull.

The program's functionality is divided into three main areas: Loading, Saving and Operators.

Loading and Saving are self-explanatory. Before working on an image, it has to be loaded into an ADPro buffer. Image files of almost any format are accommodated in this 24-bit environment, which is one of the main strengths. Savers is pretty much the same, allowing files to be saved in any one of the supported file formats, either as a straight conversion, or after you've altered it.

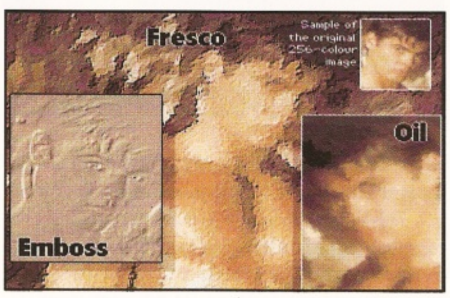
At the heart of image control in ADPro are the Operator modules. A quite unassuming list of special effects whiz by as you scroll down the Operators menu, hiding some real muscle. This ranges from the more mundane – editing brightness, contrast and so on, to the terrific – the fresco or oil paint options, for example. You can clean up images by removing stray pixels (an absolute must for digitised work, where signal noise can severely degrade an image with a speckling effect). You can soften your picture by applying a Blur filter, or create a filter effect of your own.

Unfortunately, executing a special effect can take time and it can be hit and miss. The nub of the problem is that you have to apply an effect to the whole image before seeing what's been going on. This is fine for low-res pictures because they don't take too long. But interlaced high-res data takes far too long and could eventually prove disappointing. Far better to be like ImageFX, which has a small preview option for effects. Programmers take note!

So, a bit hit-and-miss working blind, but persistence pays off and by tweaking controls and parameters and most of all experimenting, you can realise the program's potential and your own. Be warned, too, that quite a number of effects – including loading and saving in the JPEG format, demand a maths processor, which the A1200 doesn't have. Why the software pig-headedly does this is beyond me, given that both Photogenics and Personal Paint can load and save this format quite cheerfully and that ADPro is greedy for RAM in the first place.

But as far as image conversion and an ability to make sense of the many bewildering formats goes, ADPro is a no-frills get-the-job-done sort of program. If you can live with the point, click, wait interface it provides very useful features. Alongside the more visual image manipulation programs it does look drab and maybe the programmers ought to re-invest some capital in jazzing it up for non-anorak types who like a little more feedback for their efforts.

Incidentally, ADPro now supports re-targetable graphics which in essence means owners of 24-bit graphic cards can enjoy the effects in true colour. Indeed the program comes with several specialised savers which directly support popular boards such as OpalVision, Harlequin, Resolver and Retina.



Examples of the special image manipulation properties in ADPro. It really is worth the wait.



This woman, immortalised on the Amiga scene for almost a decade now, is here to demonstrate a visual aspect of ADPro, the cropping tool, which is an interactive way of clipping pictures down to size.

ARexx

ARexx is a programming language developed to allow different programs on the Amiga to communicate with each other and create a universal batch language for running software. Programs such as DPaint and Art Department Pro make use of the facilities offered. For example, ADPro can be made to automatically carry out a series of complex image manipulations from a short ARexx script.

Likewise DPaint can be opened by another application, amend an image, then return it. Note, this isn't for the dabbler or casual user because it requires some degree of skill to pipe commands to running software. No, the real bonus which most people will reap is from within programs themselves, ones which allow tailor-made sequences to be created 'invisibly' on the fly, saved and called back later.

A good example of its use is in ImageFX, where a wealth of ARexx scripts are defined to offer useful extras to the software. (See our ARexx feature in AS51).

Art Department Professional 2.5

Once the Mike Tyson of the graphics market (without the criminal record) – now the Frank Bruno. Transforms images between formats – you can convert pictures into virtually every kind of format, but more than that, it allows images to be re-sized, cropped and manipulated through special effects... The Interface is from hell though, despite the second coming. A poor second to ImageFX. ■

Price: £129.99
Supplier: Emerald Creative Technology
Contact: 0181 715 8866

Verdict: 73%

▶ 32

TVPaint 3

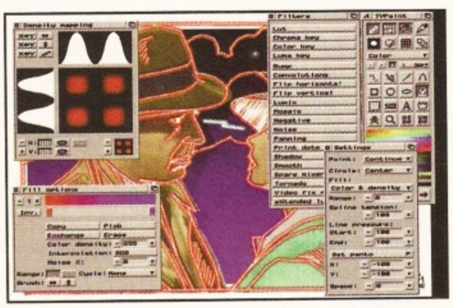
The latest version of TVPaint, Tecsoft's contender for the most professional (and most expensive) paint software on the Amiga, has arrived. **Gary Whiteley** *dons his beret and gets painting.*

Tecsoft's TVPaint has a long association with the Amiga. Indeed, I first saw it being demonstrated in April 1991 at the AMIGA '91 show in Berlin and it was so new it had only arrived that morning! I think I'm right in saying that TVPaint was the first 24-bit paint program for the Amiga and it was running on a Harlequin, one of the first 24-bit Amiga graphics cards.

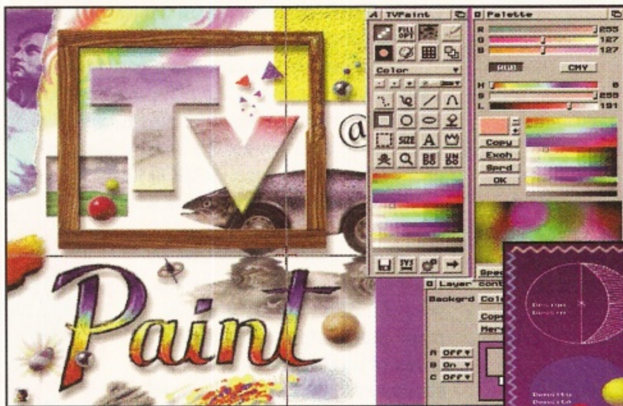
Over the years TVPaint has been married with a range of Amiga graphics devices, some of which have come and gone, whilst TVPaint just keeps on going. Indeed, there's still a version of TVPaint which supports the Harlequin and, though support for GVP is extinct, IV24 and Archos' AVideo24 cards has now been dropped, TVPaint currently works with a variety of graphics cards, including Picasso, Piccolo, EGS Spectrum and Rainbow 3. There are also Windows and Unix versions, so you can see that Tecsoft have been busy over the last four years.

The first thing that hits you about TVPaint is its price. At £495 (plus the cost of a suitable graphics card, and a well-appointed Amiga) this is the kind of price you'd expect to pay for top-notch PC or Mac software, but distributors Activa know where their market lies – TV and graphics professionals who just can't bring themselves to defect to a Mac or PC.

But why would anyone spend nearly £500 on an Amiga paint program? In terms of pure bulk there's not much to show for your half-grand. Four disks, a 180-page spiral-bound manual and a small dongle for the joystick port. Installation is easy, so let's move on.



Just a few of the many pop-up menus which can start to clutter your work area, if you let them.



Left: TVPaint 3 provides photographic quality painting – at a price.

Below: Many different drawing modes and applications are available with TVPaint 3. This image was generated by an ARexx script, by the way.





Because TVPaint is designed with graphics cards in mind, it can run in a wide range of modes and resolutions, depending on the card and the Amiga's RAM power. For best results, 24-bit work (with 16.7 million colours available) is the way to go, but other possibilities include 256, 32K and 64K colours, all in resolutions from 640x512, to the maximum your system can handle. Video overscan (768x576) is standard, as you would expect in a program with TV in its name.

What's new?

The most significant change in TVPaint 3 is its new layering system, which is most easily understood if you imagine three layers of glass positioned one in front of the other, each of which can be painted on, but which can be viewed together to form one complete image.

The beauty of layers is that they work together, but remain separate until you choose to combine them or save them as *one* complete image. In addition to being 24-bit, each layer has its own 8-bit transparency mask (elsewhere known as Alpha channel) which provides maximum smoothness between each layer.

By painting on separate layers a whole picture can be built up, yet each layer can still be individually manipulated to provide maximum flexibility before committing the final image to disk. Each of the three layers can be switched on or off at will, so you can always see each part clearly if you need to.

In addition to the three layers there's also a spare page (a la DPaint) which, as well as being used as a scratchpad page, is also used by some of TVPaint's Filter tools, another new addition. But be warned, layers eat memory and even 8Mb probably won't be enough for three complex layers.

Anyone familiar with DPaint or other paint packages will already understand many of TVPaint's drawing functions. All the old favourites are there – lines, polygons, fills, brushes, airbrush (and chalk and pencil), colour palette, text, smoothing, smear, etc. etc., but TVPaint adds an extra twist to many of these.

For instance, 24-bit brushes can be rotated in perspective, lines can be made to taper and

Main features

- **Layering system for better image composition and control**
- **All the usual paint tools + Bezier curves**
- **Wide range of filters and density settings**
- **Extensive brush manipulation, including perspective**
- **32-bit operation (24-bit painting + 8-bit Alpha Channel)**
- **Support for pressure-sensitive graphics tablets**
- **Extensive ARexx support**
- **No animation facilities**
- **Fast operation**
- **Many keyboard commands**
- **Control for V-Lab framegrabber**

text attributes, such as size, border, scaling and smoothing, can all be adjusted with great flexibility. In addition there are smooth Bezier curves and the ability to adjust curves, circles and ellipses using three points, rather than the regular point-and-drag operation, which provides greater accuracy where curve-fitting is important.

And you don't just have to draw with the mouse. Like OpalPaint (TVPaint's closest rival – see boxout), TVPaint 3 supports pressure-sensitive graphics tablets, such as the Wacom UD1212, providing a far greater range of artistic expression than a mouse ever could.

TVPaint supports a number of image formats in addition to standard ILBM (IFF) types. GIF, BMP, TARGA, Rendition, Sun Raster, SGI Image, JPEG and DEEP formats can all be loaded or saved and TVPaint also saves its own Layer format to enable each individual layer in an image to be saved separately, or together as a project.

Filters

Filters are TVPaint's secret image processing weapon, though I have to say that they aren't always straightforward to use if you only want to process part of an image. All the 'standards', such as negative, noise, smooth, flip and mosaic are there of course. Contrast, brightness, saturation and colour balance can all be taken care of with either the LUT (Look-Up Table) filter, or the more visual Extended LUT filter (which includes a thumbnail preview).

A range of convolutions (for such tasks as sharpening, blurring and edge detection) are built-in, or you can brew your own. Several filters for mixing layers are provided. Luma Key uses areas of specific brightness, Chroma Key uses ranges of colour saturation while Colour Key employs hue levels and in each case the other layer appears through the target areas of the front layer, providing quite a degree of freedom to create. There are also ripple and twirl filters which you may be familiar with through image processing programs like Morph or ImageFX.

The trouble is, there isn't any easy way of applying image processing directly to small areas of an image, so you have to use a processed version of your whole image in the spare page, the original in a layer and use the Merge drawing function to rub through from one to the other, which is neither an ideal nor flexible way to operate in my opinion. After all, OpalPaint has been able to work on any part of an image for over three years, so why can't TVPaint?

King ARexx

TVPaint has extensive ARexx support, though the manual doesn't really explain this beyond some cursory (and confusing) examples. But from the supplied demo scripts it's obvious that the commands have a lot of power and any keen ARexx programmer could have a lot of fun with TVPaint, should they so choose.

But for the computer-illiterate artist TVPaint's ARexx functions will be difficult to understand from the manual, which is a shame because a lot of interesting possibilities might otherwise remain unexplored.

It's not all roses...



Perhaps the biggest stumbling block is TVPaint's less-than-comprehensive manual, which seems to be a hybrid Windows/Amiga version and the tutorials could really do with beefing up to fully expose the program's power. I also have a bone to pick with all the pop-up menus, which can really clutter the workspace if you let them.

One major problem I experienced (though I'm told it's only ever happened to me) is that JPEG images wouldn't load correctly – even ones saved from within TVPaint itself – resulting in just half the image appearing on screen.

And guess what? TVPaint has no printer output, even though the illustrations in the manual show that it has. Unfortunately, these are grabs from the Windows version and don't apply to the Amiga one. So if you want to print out your graphics you'll have to find another method.

TVPaint has no animation facilities, so, like OpalPaint, you'll have to use external compilers specific to your graphics card. One advantage that the OpalVision system *does* have is that it provides software to compile and play 8, 15/16 and 24-bit animations, which isn't possible with programs like MainActor (which is supplied with the Picasso II card I was using).

All that said, TVPaint is nevertheless a fine program, but one which could still stand some improvement. It *is* a program geared towards real artists, though I'd say we're talking corporately-employed or unfashionably rich artists here, not your poverty-stricken Van Gogh. If it was half the asking price I think it would sell pretty well, but it's just too expensive as it stands, particularly when you add the cost of a graphics card, extra memory and a pressure-sensitive graphics tablet.

Finding your way around TVPaint can be quite frustrating and time-consuming, but there's certainly a lot of power bursting to get out. If you're a professional Amiga artist and money is no object then TVPaint could be just what you're looking for. ■

The rival – OpalPaint

OpalPaint is the paint package bundled with Centaur's OpalVision video-slot graphics card and working exclusively with it, which obviously limits its appeal. Although it hasn't been upgraded for a while (the last version being 2.3b) it still gives TVPaint a run for its money, particularly since it comes with a 24-bit display card for free (at least that's how I think of it). And OpalVision has 24-bit animation facilities too. Granted, OpalVision isn't an RTG or EGS card, so it can't improve the resolution of standard Amiga applications, but it is genlockable and works well.

OpalPaint has many of the features of TVPaint 3 – Alpha Channels, CG font support, multiple work screens (though no layering), masking, powerful fill and stencil tools, a wide range of image processing filters, more brush types than TVPaint, extensive ARexx commands, multiple image format support and more flexible drawing operations where selected image areas only are to be manipulated.

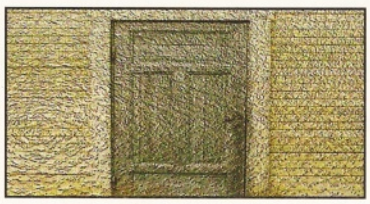
For my money, OpalPaint is still an excellent paint program and I use it every day, so I reckon I should know. For more information on OpalPaint call White Knight Technology on ☎ 01920 822321.



OpalPaint is a strong rival to TVPaint as far as features go, if you've got an OpalVision card.



Right: Text handling, especially from CG fonts, is particularly impressive, with many useful user options available.



Above: Bump, one of TVPaint's filters, uses the spare page image to add relief effects to the foreground layer.

Requirements

An accelerated Amiga 2000/3000/4000 with co-processor; a graphics card such as Picasso, Piccolo, EGS Spectrum or Rainbow 3 (Harlequin version also available); plus at least 8Mb RAM (more is recommended) and hard disk. Note that the RAM must be in continuous blocks, not split between 16-bit and 32-bit, for example.

TVPaint 3

Price:	£495. Upgrade from any other paint program £395
Supplier:	Activa International Ltd.
Contact:	0181 402 5770

Verdict: 84%

Mail Order

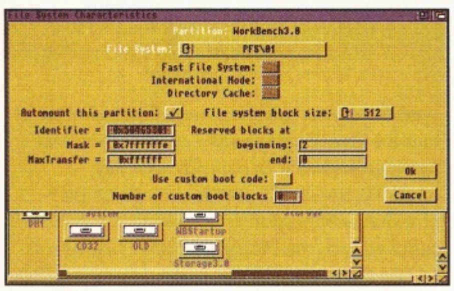
We want you to have the best for your Amiga and we don't want you to break the bank to get it, so check out our Amiga Shopper reader offers, all at low, low prices.

Turbotech Clock Cartridge

Your Amiga will always know what day it is with this handy device – even after it's been switched off! Once installed, your Amiga will boot up with the correct time and date already set. Simply fits into the disk drive port (or on the back of your second drive). Complete with software.



Description	Turbotech Clock Cartridge
RRP	£19.99
AS price	£17.99
Order code	AMFCLO

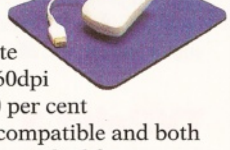


Ami-FileSafe

The new "de facto" standard filing system for the Amiga. Not only does Ami-FileSafe achieve greater speed and efficiency than FFS, it also brings the added security of a filing system that can survive system failures, Guru meditations and crashes without causing disk block errors.

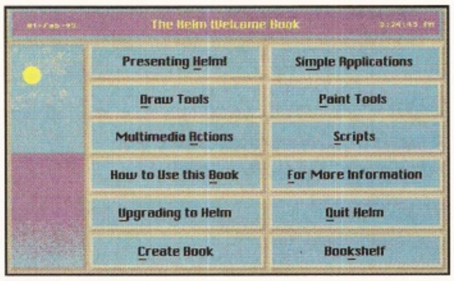
Description	Ami FileSafe
AS price	£69.75
Order code	ASAFS

Mouse 'n' Mat



At last! A quality replacement-mouse at a bargain price, complete with mouse mat. The 260dpi resolution mouse is 100 per cent Amiga- (and Atari ST-) compatible and both buttons are fully micro-switched for maximum reliability and performance.

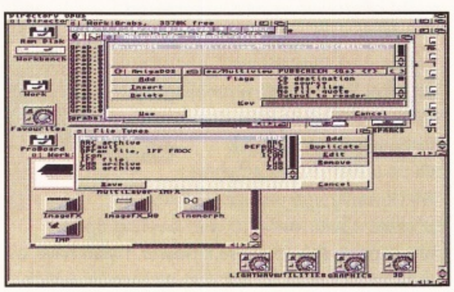
Description	Mouse 'n' Mat
AS price	£12.99
Order code	AFMM



Helm

A true multimedia authoring system for the Amiga, Helm earned 91 per cent when reviewed by our Consultant Editor Nick Veitch in Amiga Format. Create custom image editors, personal information managers, presentations, kiosks, free form databases, or educational courseware. Helm is both an authoring system and a graphics program, combining draw, paint and image processing tools with a scripting language, a hypermedia database manager and an assortment of user Interface objects.

Description	Helm
AS price	£99.95
Order code	AMF503

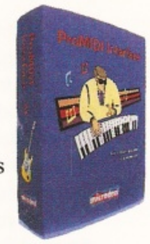


Directory Opus 5

This latest incarnation of the superbly powerful and well-designed file manager received 92 per cent and an Amiga Shopper Star buy award in issue 51 (see page 104 for back issues if you missed that one). Directory Opus 4 was brilliant and version 5 is no exception. Now this excellent program can be yours for £10 less than the RRP of £59.99.

Description	Directory Opus 5
AS price	£49.95
Order code	ASOPU

MIDI Interface

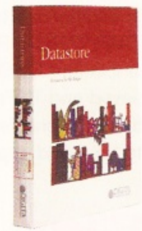


Test your Amiga's musical talents with the fully-featured ProMIDI Interface. You can connect synthesisers and drum machines to your Amiga and use the samples with Amiga Format's Music-X and OctaMED Coverdisks.

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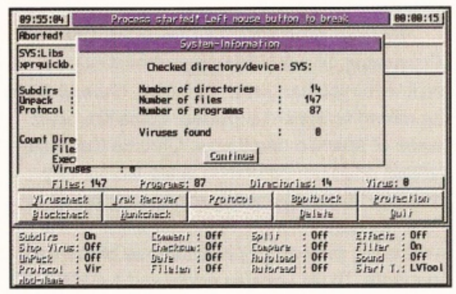
Description	Midi Interface
RRP	£24.95
AS price	£19.95
Order code	ASMIDI

Datastore



Datastore is an accessible and powerful database. The number of records is limited only by the amount of RAM you have available (at least 1Mb with WB2 or 3). Easystart templates that accompany the package include Club Membership, Recipes, Address Book and an Amiga Format magazine guide. The Amiga Shopper magazine guide, on the March AS47 Coverdisk, has been designed to be used with this ground-breaking release.

Description	Datastore
AS price	£49.99
Order code	AFDAST



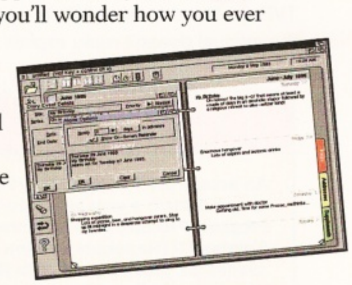
Antivirus

Siegfried Antivirus Professional – to use its full name – is an essential buy for those who suffer from virus attacks. It can be used with all types of Amigas with an 1.3, or advanced Kickstart version and 1Mb RAM. Save £5 off the RRP of £39.99 by buying from AS!

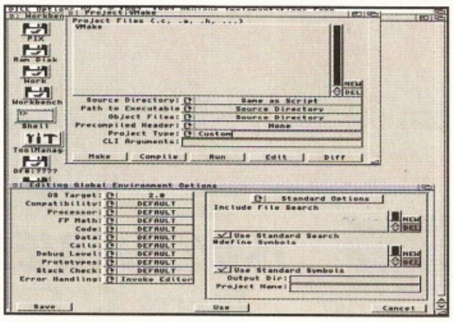
Description	Siegfried Antivirus Professional
AS price	£34.99
Order code	ASHVIR

Digita Organiser

An Amiga Shopper Star buy, after using this program you'll wonder how you ever kept your appointments in order. Easy to use, but full of features, this is truly the king of electronic filofaxes.



Description	Digita Organiser
AS price	£34.99
Order code	AMSDO

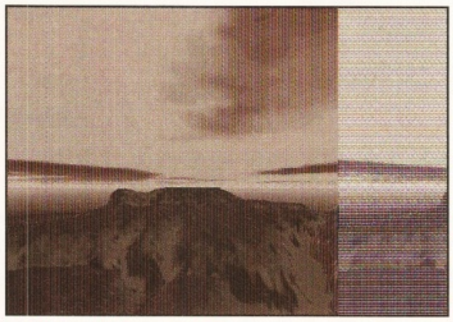


DICE 3.01

Save over £30 when you buy the full version of our DICE Coverdisk in issue 47. The full package comes on five disks, with a 450-page manual, and new features, including: no limit on the number of procedures in each file; revision control system; link libraries for 1.3, 2 and 3; extra link libraries; higher maths functions such as FPU; support for bitfields, pragmas, etc.

save £30

Description	Dice 3.01
RRP	£129.99
AS price	£98.95
Order code	AMS501



Vista Pro Lite

This truly amazing fractal landscape program from Meridian enables you to build your very own scenery on your trusty Amiga. After you've created the absolutely perfect landscape, you can animate it to create stunning fly-bys, or simply use it as backgrounds in your own games, pictures or 3D renders. *And* it even works on standard A1200s. Definitely one not to miss!

save £35

Description	Vista Pro Lite
RRP	£59.95
AS price	£24.99
Order code	ASVIST



Photogenics

There can't be a single Amiga owner who isn't aware of this powerful package and the incredible impact that it has had on the Amiga scene. The most talked about image manipulation package ever also brings you the creative freedom of a traditional paint program. Check out Graeme Sandiford's Photogenics tutorial on page 66 and find out what this great program can do. And you could, of course, get hold of Amiga Format issue 69 and try out the demo on the Coverdisk before buying.

Description	Photogenics
AS price	£54.95
Order code	ASH502

Personal Paint 6.1 and Personal Fonts Maker 2

Take advantage of our very special AS mail order offer and get the truly excellent Personal Paint, plus the bitmap font editor, Personal Fonts Maker.



Personal Paint is a paint, image processing and animation program, and is an ideal graphics package for programmers and the more serious Amiga users.

Personal Fonts Maker offers support for standard mono and colour fonts, as well as outline fonts and AGA screen modes. The program uses the same graphics engine as Personal Paint and allows you to create bitmapped fonts of your own, which you can colour and use for posters, business stationary, album covers and so on. PFM is easy to use, has lots of features and the results are pretty impressive. Now you can get both these great programs for a bargain price of £49.95.



save £10

Description	Personal Paint and Personal Fonts Maker
RRP	£59.95
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The Siamese System



The latest development for Hi-Q's PowerStation, the mysteriously-named "Siamese System", is near completion. **David Taylor** *reveals all.*

The PowerStation itself is a damn good piece of kit (see our review in AS51), allowing A1200 users to develop their systems far further than ever before. All of this is possible because of the new SCSI connectors, like the Squirrel, that fit into the PCMCIA slot on the side of the machine. As if bringing the SCSI peripherals to the Amiga market wasn't enough, now the PowerStation is being developed further.

For years we've been craving some sort of PC compatibility, not because PCs are better machines, but because they have access to cheaper peripherals. Could our wait finally be over? Maybe. The Siamese System is an upgrade kit that will convert the PowerStation to a full blown Amiga/PC multimedia system. Of course, users who don't have a PowerStation can buy the whole lot in one bundle.

So what is it exactly? Well, it consists of a DX2-486/66Mhz-based system, including a 16-bit sampler, electronic monitor display switching, SCSI drive sharing and single keyboard and mouse operation.

OK, but what does that mean? Well, you'll have a PC board inside the PowerStation that will be linked by software to the Amiga, which will allow your Amiga to access all the PC peripherals. At the moment the software, still being completed, allows you to switch between the PC and the Amiga, but uses the PC resources to control both, i.e. you use a PC keyboard and mouse to control both systems. When it is completed, it's hoped that this will be reversed, with you using the Amiga keyboard and mouse to operate both, doing away with the need for a separate PC keyboard. Hurrah!

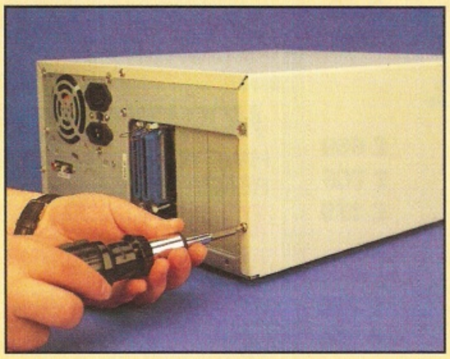
The point of being able to access PC hardware, at least initially, is that everything is so much cheaper. The price of a SCSI tape streamer alone, currently the only way of attaching a PC to the Amiga, is roughly the same as this system, but here you can add a cheap tape streamer that uses the PC floppy bay. OK, it's not the same size, but the tapes themselves are cheap enough to make it immediately attractive.

It's possible that you'll also be able to access things like the PC HD floppy drive, which is very useful for A1200 users who only have a DD drive.

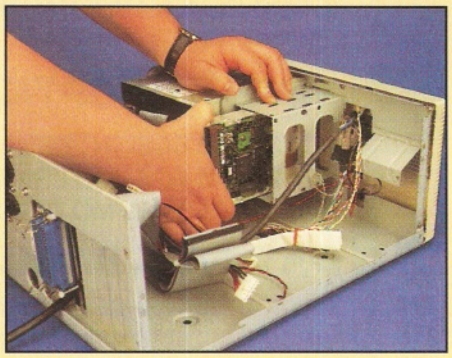
Steve from Hi-Q said, "due to you having a full-blown PC motherboard, you have access to very cheap add-ons, for example motion video grabbers like Fast Aviator real-time video capture and compression cards at less than £200, ideal for Amiga animators. Ethernet cards cost about £30 and allow access to very low-cost networking solutions."

Of course, the real beauty is that you don't just get to use the PC peripherals; you've really got a '486 PC as well, which means that should you want to run some of the PC software, you can! The finished data can then be transferred to your Amiga, and you don't need to worry about any emulation incompatibility, because it's a PC. All you need is a monitor capable of

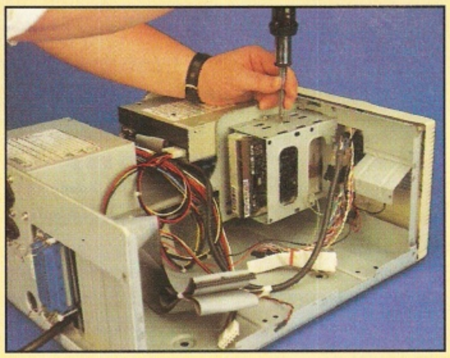
Hi-Q PowerStation walk-through – just how easy is it to fit new drives?



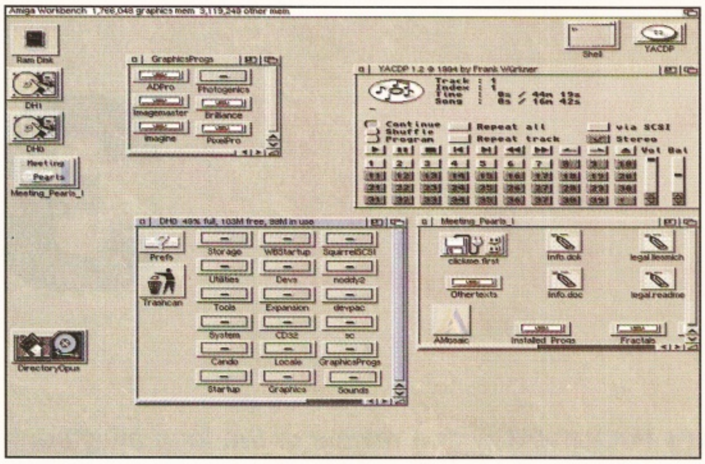
1 ***Ensure that all power leads are turned off and disconnected. Then unscrew the four holding screws on the back of the PowerStation and remove the casing. Place these safely to one side, keeping the screws together.***



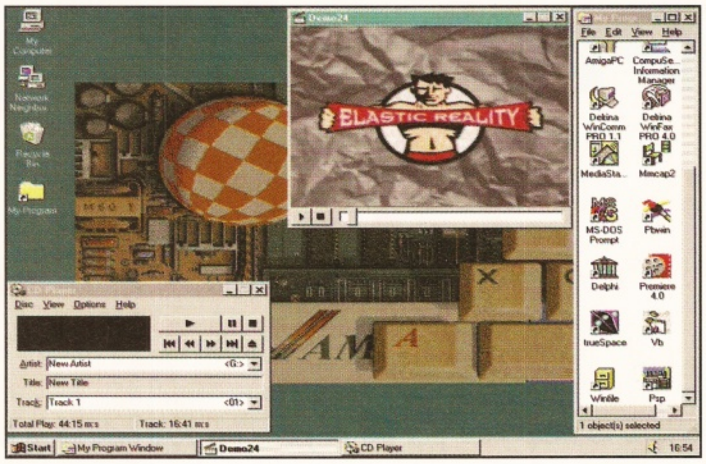
2 ***Slot the drive into one of the bays. If you prefer you can unscrew the bay easily and remove it to fit the drive externally. Make sure the connectors on the drive are facing outwards.***



3 ***Screw the new drive into the bay so that it is secure. If you left the bay attached to the PowerStation, you will only be able to access the top screws, but that should be enough. If you did remove the bay, replace it and screw it in.***



The Amiga Workbench screen shows the access to the CD drive which is shared with the PC, whose screen is behind this one.



The PC inside the PowerStation accessing the same CD drive. The link software is launched from the icon in the top left of the programs' window.

SVGA graphics, like the Microvitec range that so many Amiga users already have.

Because you'll have a separate processor, it will be possible to use the PC to do some of the work on compatible programs, whilst you do something else on your Amiga. If this is your aim, then it may be that you'll need some extra speed. Not to worry, because that's just what you're going to get.

"We will have a Pentium option and later a P6 system for serious users which will come with MPEG playback plus optional MJPEG video recording, or a version with real-time hardware-based 3D acceleration built on to the graphics card. They will be ideal for the professional animator who wants a second processor for rendering whilst using the Amiga's much better Operating System for object and scene development."

So, to start with, the system will essentially be two separate entities that use software to share resources. Paul Nolan, the creator of Photogenics, has been brought on board to complete the project. Initially there will be little direct communication between the two machines' processors.

Could this change? If a program had a runtime (program engine) written for the PC, then certain calculations would be thrown to the PC for its processor to deal with and then sent back to the Amiga. In other words, programs could start using the '486 or Pentium to speed up rendering times enormously. Which software might be the first to do this? Not difficult to guess, with Paul Nolan on the team. There's another, even more universal possibility for the Amiga to use the PC's processor, but this is still in planning stages, so we'll keep you posted.

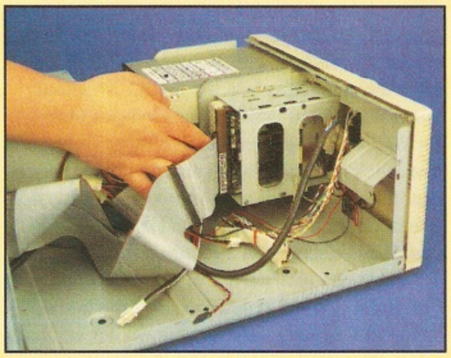
All this means even stage two isn't the end of development. "Future aims are to fully integrate the system to become what we expect the Amiga to evolve into, which is a multi operating system computer platform capable of switching between systems seamlessly and sharing all data between tasks. This will take the Amiga where it needs to go, including having access to the PCI card bays, which although seeming similar to the excellent Zorro 3 slots, are becoming a defacto world standard on many platforms. It will allow Operating System independence to plug in high performance cards."

> "We should soon have access to PC **peripherals** and further exciting developments."

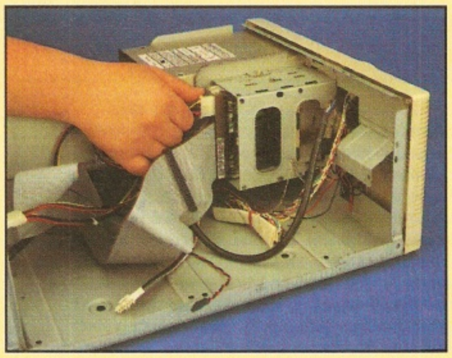
At the very least, we should soon have access to PC peripherals and then further exciting developments. So when is it going to be ready? "Due to the high standards set by the Amiga OS, we have decided not to launch until Windows95 is launched. This system, whilst not in the same class as the Amiga in multi-tasking, is a well-rounded program and already integrates nicely with the Amiga's way of working. It makes the whole system very friendly.

"After the main launch of the PowerStation upgrade we plan to launch a card to be plugged into any suitable '486 PC system giving the same features."

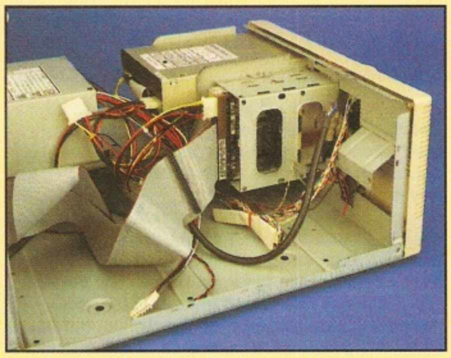
The Amiga may have not seen any official development for a year and Escom might not be looking at an Amiga PowerPC, but that hasn't stopped it looking more and more possible! If you want more information, you can contact Hi-Q for a pack. ☎ 0181 909 2092. ■



4 Take one of the ribbon connectors and line up the pins on the back of the drive with the ribbon connector's holes. Push it firmly on, making sure it is evenly and fully connected.



5 Take any one of the power leads. These are easily distinguishable – they're the ones with multi-coloured wires going in. Do the same as with the ribbon connector and push it firmly on to the drive.



6 That's it. The drive is fully connected. Replace the casing and screw it back on. Re-connect the power and other leads. Your PowerStation should now be ready to use with the new drive accessible.

ProVector 3

Here to help you get rid of your jagged edges is **Larry Hickmott** *with a review of the long-awaited ProVector 3, the only choice when it comes to structured drawing, according to the advertising blurb.*

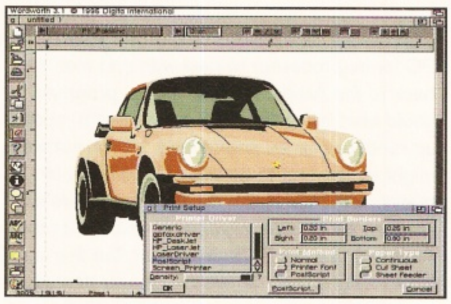
The advertising material accompanying Stylus's ProVector 3 tells me there's no other choice when it comes to drawing packages and how right they are. A few years ago, structured drawing on the Amiga was dominated on this side of the Atlantic by a program called Professional Draw and, to a lesser extent, Art Expression.

Nowadays, Professional Draw and Art Expression are gone from the market place and there's only ProVector 3 left to fill the void. This is quite ironic since ProVector only became popular, and indeed known at all, after being released as a Coverdisk on Amiga Format well after the popular packages had been dropped.

ProVector 3 though is much more than just a structured drawing program. So much so, it's actually called the Stylus Pro-Pak, a name that is slightly confusing the branding of this product since most will know it simply as ProVector 3. Whatever your preference for the name, the contents are the same. These being ProVector 3, PSImport (PostScript import module), Stylus Tracer (autotrace) and RexxRequest.

It sounds like a lot, but is simply a couple of disks containing two programs, an ARexx utility and a PostScript import module. Compare this with something like Corel Draw on the PC which comes with a load of clip art and utilities, and ProVector looks decidedly light on content. Jeff Blume, Vice President of Operations at Stylus Inc. puts this down to the state of the Amiga market. He says that companies weren't exactly falling over themselves to provide clip art or fonts when Stylus mentioned the dreaded word Amiga. Stylus, though, are looking to increase the content of the package where able.

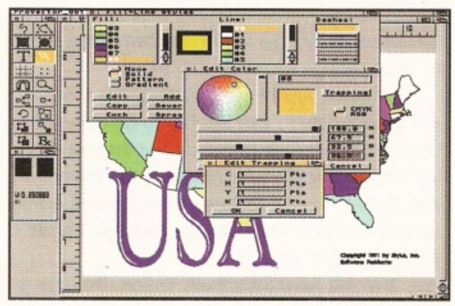
Which is good news for the users coming on-stream later this year since software is going to be important in helping to revive the Amiga.



Pages in programs like Wordworth can be saved as PostScript files and then imported and edited in ProVector 3.

The main course

As mentioned, the Stylus Pro-Pak contains a number of programs, with the main course being ProVector 3, a program vastly different to version 2 which appeared on the cover of Amiga Format and has sold successfully in the US for years.



One of the high-end features in ProVector is for trapping colours in images that have been colour-separated and printed on a printing press.

This latest version supports 256 colours on AGA Amigas. This means colour images look a lot prettier on-screen and with a larger internal colour palette, they print better too. The Interface for ProVector 3 has also come in for a lot of changes, including the toolbar which, although improved on version 2's, bears no resemblance to the one in the manual.

Jeff Blume defends this policy by stating that a new manual would have delayed the release even more and goes on to say that Stylus are looking at producing a new manual soon. Jeff's advice to anyone buying the program is to consult the on-line help first, a policy I recommend.

The significant changes for me in version 3 are ProVector's IFF output, support for PostScript Type 1 fonts and PostScript files, impressive gradient fills and for high-end users, PostScript colour separations with Trapping. All of these are welcome, especially the IFF-ILBM output (including 24-bit) which means images from ProVector can be imported into many programs that wouldn't ordinarily be able to do so. You can, for example, create a drawing in ProVector 3 and import it into a program like Final Copy II that doesn't support a structured format.

For those worried about jagged edges, ProVector 3 enables you to export the bitmap image at a specific size for your printer, so that when it's output, it can be scaled down in your software to avoid any jagged edges appearing on the hard copy. Having spelt out the changes for you, it's also worth mentioning a few points about using ProVector 3.

Anyone who has mastered version 2 will be at home with the latest offering because,

Jargon busting

Adobe Illustrator – A propriety Encapsulated PostScript format created by Adobe Inc. for their structured drawing program called Adobe Illustrator. One of the most widely used formats in computing.

Bezier Curve – A type of curve that consists of anchor points. Associated with these are control points which are used to change the shape of the curve between the anchor points.

IFF-DR2D – A structured format which was developed as a standard on the Amiga, but has never really made it on this side of the Atlantic.

PostScript – PostScript is a page description language. Programs that can output PostScript files are able to create a file using a special language which describes the page and all the objects on it to a device that can understand the PostScript language. This device can be hardware or software.

Structured drawing – In the day-to-day business of using pictures on our Amigas, there are two categories of images: bitmaps and structured drawings. Bitmap images are made up of building blocks called pixels and when they're scaled, the pixels are made bigger or smaller. Images scaled in this way tend to end up with jagged edges when made larger or distorted in some way. Elements in a structured drawing, however, are described using mathematical formulas meaning that this type of picture can be scaled or distorted with a limited loss in quality.

Trapping – A method of overlapping colours so that, when printed, the paper colour doesn't appear if the registration isn't perfect.

Vector – A line defined by two end-points with the position, weight and strength of curve described by mathematical formula.

despite having a different toolbox, ProVector's somewhat quirky (to me anyway) way of working still remains. Anyone changing over from ProDraw or Art Expression will probably have some adjusting to do. This isn't helped by the manual of course, which could definitely do with some tutorials to help the operator make sense of it all. I'm told these are in the pipeline.

Word games

Tutorials on creating "text on a curve" would be worth starting with. The manual has a few, but could do with going a lot further. Text on a curve may be a gimmick to many, but it's surprising how useful it is in design work. The options in ProVector 3 for this function seemed limited compared to an old program like ProDraw. There are work-arounds, but these can be hard.

Things perked up when it came to using the PostScript fonts that ProVector can now make use of. Its ability to use this type of font, simply by pointing the program at a directory and then selecting the one required, will find favour with many, including me. Equally useful are the range of gradients that can be applied to objects and text. Stunning headings are now child's play. Not as well implemented is the Fill Patterns function which needs to be simplified so it's more user friendly. It works and opens up a lot of creative possibilities, but it took a while to understand.

The range of things you can do to text and objects doesn't end there. ProVector 3 has a number of special effects like Skew, Mirror, Warp, Blend and Perspective. I'd like to see others included, like Extrude with gradient and patterned fills, but, alas, as Jeff Blume points out, the product had to ship sometime and time ran out. I get the feeling that Stylus would like to do much more to ProVector 3 and are already making notes of possible new features. Their implementation though, will depend on whether the Amiga community gets behind this program.

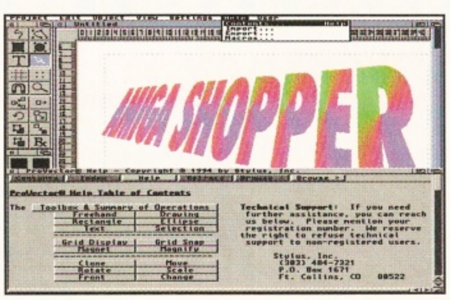
Of all the effects in ProVector 3, there are two that stood out: Perspective and Warp. Not only are these intuitive to use, they're fun as well and, along with the gradient fills, give the program a certain edge over its deceased rivals. The thing about ProVector I like most is that you don't have to be able to draw to create interesting images.

Interchanging formats

Hollywood aside, one of the main uses for ProVector is in converting different structured formats so images from a PC or Macintosh can be used in popular Amiga programs. You may, for example, have some EPS clip art from the PC which you want to convert to work with your word processor like Final Writer. Judging by the number of letters I get, this is one of the main requirements for a lot of Amiga users and ProVector has some interesting options.

You can, for example, print a PostScript file to disk in Wordworth and then import that into ProVector 3 to be edited. The uses for this are many, like converting CGM images into EPS ones for use with other applications, or printing PostScript files to non-PostScript printers. ProVector also supports a number of other formats like IFF-ILBM, HP-GL and the little known Amiga format of DR2D-IFF.

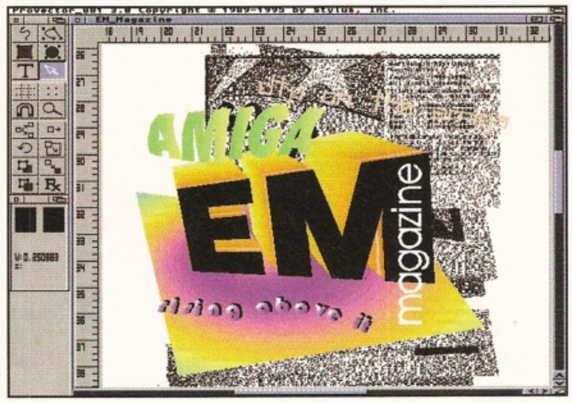
The part of the program we haven't touched on yet is the art of drawing. Unlike paint programs, using a drawing program to create pictures can be a nightmare, especially if you have zero artistic talent like me. ProVector has all the normal tools a drawing program should have, including ones for drawing curves and straight lines, scaling and rotating objects and altering the layers of objects in a complicated image. The combination of a Straight line function and Bezier curve tool in just one tool is rather quirky though and separate tools for each would make life easier.



On-line help is never far away, although it still doesn't make up for the manual which is out of date with this latest version.

ProVector (right) is a powerful drawing program which enables you to mix structured and bitmap objects. One of the most intuitive features in ProVector is the Perspective tool (below).





Joining the dots

Speaking of separate tools, as well as ProVector, the Stylus Pro-Pak also includes a program called StylusTracer. It's a utility for want of a better word, for auto-tracing bitmaps and converting them into a structured drawings. Great for creating simple logos from bitmap templates.

What's surprising about StylusTracer is the number of special tools for image processing bitmaps. The advertising says these are for preparing bitmaps to be traced, but anyone tracing embossed images and the like better be prepared for huge files. Why you would want to do that is beyond me, but the option is there in case you get curious. Once bitten, twice shy and all that.

As a bitmap editor, StylusTracer is quite effective with the clean-up tools coming in fairly handy when preparing images for tracing. StylusTracer, though, is no match for paint programs like Deluxe Paint or Photogenics, but then they can't trace bitmap images and StylusTracer can. In fact, it does a very good job of it, which makes it a useful tool for publishers to have in their toolbox.

Once a bitmap has been traced, it can be saved to disk in formats like DR2D-IFF or Illustrator 88. The other utilities included in the package, such as PSImport and RexxRequest, are a mixed bag. RexxRequest is a command host utility for programmers of ARexx who want access to the gadtools.library. Useful yes, but only to a small number of users. PSImport, however, is a module that can be run separately or used in conjunction with ProVector for importing PostScript files as mentioned earlier. Expect mixed results with PSImport, though, because not all the PostScript files I threw at it were rendered correctly. The test file from Wordworth 3.1, however, worked out beautifully.

Conclusion

It's a tough one to call, but I definitely think the program is over-priced. If Stylus want to make an impact on the European market, I think they will need to look at their overheads to bring the price down. There is no doubting ProVector's power which, though not awe-inspiring, is still pretty impressive. Being modular in parts, there's room for new import and export filters (a LightWave filter is in development) as well as some special effect functions as seen in many modern PC drawing programs.

Provector 3

When it comes to drawing packages on the Amiga, ProVector 3 is certainly one of the best we've ever seen, though the price may be a stumbling block for many.

Price: £199.95

Supplier: Meridian Distribution

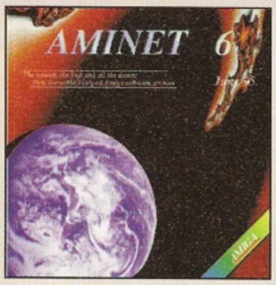
Contact: 0181 715 8866

Verdict: 84%

Upgrades

Those of you who have the ProVector Amiga Format Coverdisk can upgrade for US$149.95 plus shipping (US$20). Registered ProVector 2.1 users who have also registered PSImport can upgrade for US$99.95. A power-up offer has been established which allows users of ProDraw, Design Works, Aegis Draw and Art Expression to upgrade for $149.95. Contact Stylus on ☎ 001 303 484 7321 for details.

D-ROM...CD-ROM...CD-ROM...CD-ROM...CD-ROM...CD-ROM...CD-ROM...CD-ROM...CD-ROM...CD-



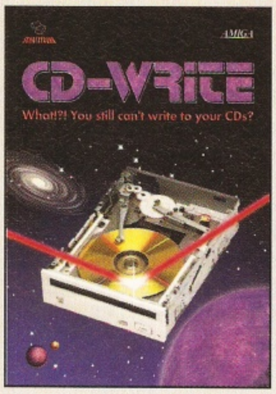
Aminet 6

Aminet CD 6, dated June 1995, consists of approximately 1,1 gigabytes of software in 3600 archives. Since the release of Aminet CD 5 more than 540 MB new software has appeared. The current edition has a special focus on demos, more than 1800 demos from Aminet were included. User friendly access software make the Aminet CD 6 a pleasure to use. £14.95



Aminet Set 1

Aminet is the world´s largest collection of freely distributable Amiga software. Up to 10.000 users access the vast archives ervery day and countless programmers publish directly via Aminet. Until recently access to Aminet was restricted to international network users. With Aminet Set 1, consisting of 4 CDs, the complete archive is published the first time. This CD-ROM-collection, which is dated January 1995, offers an almost inexhaustible reservoir of top-value Shareware. A wide variety of programs is included: Applications, Games, Demos, Pictures, Mods, Animations, Developer-Material, ... It contains approximately 4 gigabytes of software in 12.500 archives and you will enjoy the comfortable user-interface. £29.95



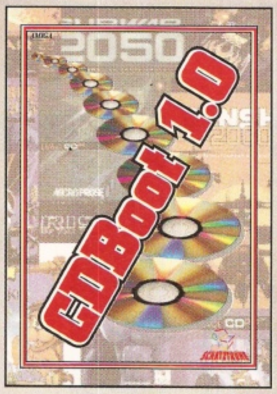
CD-Write

What!?! You still can't write to your CDs? CD-ROMs have long been an essential part of Amiga computing. Many users already own a CD-ROM drive, and the number of software packages available on CD is increasing steadily. Until now, though, it was not possible to write to CDs. We have solved this problem with our new revolutionary product: Ralph Babel and Stefan Ossowski's Schatztruhe are proud to present what can be considered a marvel of technology: CD-Write enables you to virtually write to CDs with an ordinary CD-ROM drive. From now on, you will be able to write, delete, and modify data on your CDs. This product will take you into a new era, and you will be able to utilize CD-ROM technology to its fullest. £44.95



FreshFish 8

The FreshFish CD-ROM-series, produced directly by Fred Fish, provides Amiga users with hundreds of megabytes of the latest freely redistributable software. Published approximately every two months, each volume is a two CD set containing new submissions since the latest volume, as well as an ever growing selection of tools, libraries, documentation and other useful material that is updated with every release. £29.95



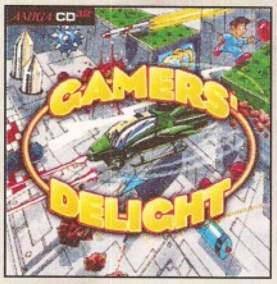
CDBoot 1.0

CDBoot is a fantastic new product that enables you to use almost any CD32 games on an A1200 or A4000 (with AT- or SCSI-CD-ROM drive and any filesystem). You can create a configuration file for each CD, containing information on the Joypad emulation. You can also save the highscore of each CD32 game. The usage and installation of CDBoot is very easy, also for beginners, due to the excellent English manual. Since the compatibility is very high, you can use 98% of CD32 games currently available. CDBoot is an excellent software solution for all Amiga-Freaks, who would like to enter the world of CD32 games! £34.95



FreshFonts II

The FreshFonts II CD-ROM contains 632 megabytes of fonts for almost any computer system. Most of the fonts are freely distributable, except for the Thienen fonts, which are exclusive on this CD. Each of these fonts is included in four different formats: DMF, Agfa IntelliFont, Adobe and TrueType. There are 231 font families on this CD (each containing of up to 8 different styles). They are classified in seven categories: Deco (63 families), Non-Latin (33 families), Pictures (16 families), Sans Serif (29 families), Script (36 families), Serif (36 families), Thienen (19 families). £19.95



Gamers' Delight

This CD contains 40 games for the Commodore Amiga from differing categories. Action, Jump & Run, Card Games, Puzzles, Strategy Games - a whole range of computer entertainment awaits! Gamers' Delight will hold you captivated for hours and guarantees long-lasting pleasure. All games are commercial versions - no public domain & no demos! This CD can be run on any Amiga with CD-ROM drive, CDTV or Amiga CD32 Console with 1 MB free memory and Joystick/Joypad. £29.95



GoldFish 2

Volume 2 of the GoldFish series contains a selection of software, animations, pictures and other material released on FreshFish CD-ROM's between October 1993 and November 1994, with most of the material updated to the latest available versions. All material is included in both archived (BBS-ready) and unarchived (ready-to-run) forms. £29.95



LIGHT ROM

The LIGHT ROM CD contains almost 650 megabytes of 3D objects, images, images equences, scene files, surface attributes, bump maps and textures in IFF and TARGA formats, DEMs, and Lightwave related text files. LIGHT ROM is an invaluable resource for Lightwave users, and as a bonus, includes material for Sculpt 3D and Imagine users. £44.95



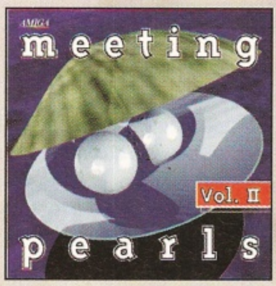
Magic Illusions

3D Stereograms on your screen! A new, interesting entertainment is born: Without special aids a three dimensional colourful and fantastic object appears suddenly on a two dimensional strangely patterned picture. The illusion of depth has already stunned millions of people around the world. Now you can view the stereograms at home on your screen! All you need is on this CD. Besides 200 stereograms with varying difficulty, there is software on the CD, which enables you to create your own 3D pictures. £12.95



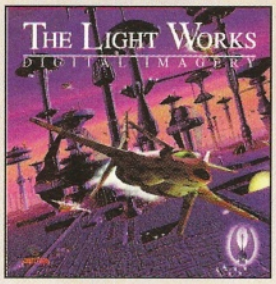
Gateway!

Gateway! offers NetBSD 1.0, a full featured UNIX-like operating system with both sources and binaries for the Amiga, i386, Sun 3, and other architectures. Go netsurfing with the large selection of supplied networking tools. Other supplied packages include a binary release of the X window system (X11R6) for the Amiga, with many additional clients, and packages such as perl, emacs, games, mail programs, and many megabytes of important text files such as RFCs and FAQs. A complete installation guide is available on the CD. There are also some AmigaDOS internet utilities, such as clients for AmiTCP and Envoy. £9.95



Meeting Pearls Vol. II

The Meeting Pearls Volume II contains 650 MB of the finest FD software via a special user interface, which has been created to allow you to find the program of your choice with ease. The contents: 35 MB of selected html-pages - 50 MB graphics programs and data -15 MB games - 10 MB from "The Party '94" - 13 MB disk, hard disk - CD-ROM and SCSI tools - 19 MB various other tools - 11 MB educational software - 25 MB terminal programs - 25 MB animations, mainly from Eric Schwarz - 40 MB developer tools (e.g. pre-installed compiler (DICE, Oberon, Modula), Commodore-Includes, GUI-Tools) - 9 MB music programs - 10 MB midi programs - 27 MB pictures - 60 MB texts, FAQs, CD contents files, etc. - 40 MB linux for Amiga - 100 MB TeX installation (PasTeX incl. 600 dpi and fax fonts) - 38 MB movie data base - 50 MB archives for Psion - 18 MB modules - 50 MB NetBSD for Amiga, ... £9.95



The Light Works

Raytracing - A fascinating area of the computer graphics. Pictures from the computer, perfectly rendered, fascinate people all over the world. The Amiga was the first computer to be used for raytracing, and today it is still a leader, with many high quality programs. A real artist of raytracing is Tobias J. Richter from Cologne/Germany, whose detailed objects stun the people. Especially his space ships of famous science fiction films are used to demonstrate the capabilities of a raytracing program. The objects are highly detailed and extremly realistic due to the application of complex surface textures of the models. Until now it was difficult to acquire these objects in order to create ones own scenes or animations. £39.95



The Beauty Of Chaos

Dive into the fantastic world of the fractal geometry and make a safe journey through the depths of the mandelbrot set. This CD includes: 507 mandelbrot pictures in GIF format (256 colors) in the resolutions 1140x890,1024x768, 640x480 pixel, 20 selected true color pictures in TIF-format, Graphic viewers for PC, Amiga and Macintosh (packed). £14.95

All products are available in your local Amiga-shop or through national mail-order-companies

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International Distributor:

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Tel +49-6171-85937
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EMail: Compuserve 100336,1245

Pro Grab 24RT Plus

Anything that scores over 90 per cent in Amiga Shopper (AS44) could quite rightly be considered among the best on offer. **Steve McGill** *finds out if the ProGrab 24RT Plus has just got better.*

The ProGrab 24RT digitising hardware and software package from Harwoods impressed us so much first time round that we awarded it a cool 94 per cent.

Not resting on their laurels, Harwoods have now tried to improve the whole thing by offering more to the user than many thought possible for the relatively low asking price.

The first of the changes is in the hardware itself. Rather than offering composite video grabbing only, owners of Hi-Band video equipment – be it Hi-8 or S-VHS – will now be able to make use of the new S-connector and exploit the increased resolution that Hi-Band grabs make possible.

The second change concerns the software driving the unit in the first place. It has been completely revised and rewritten and now offers the user much more control and flexibility over the file formats dealt with and also the rendering, manipulation, and processing of the grabbed images.

But firstly, those file formats. Images can be loaded and saved in any of the following formats: BMP, IFF, JPEG, PCX, and Targa. You'll be hard-pushed to find yourself unable to make use of these formats. The only standard conspicuous by its absence is GIF.

Image manipulation is now complemented by no less than 54 Filters and 14 Effects. These are executed using a reasonably neat method which means that before committing to any permanent changes, a Test can be run on the image which shows the user what the Filter or Effect will look like. If the user is satisfied with the change they can make it perfect by clicking on Execute. If not, it's just a matter of Redrawing the image.

On the whole, this works well. The Modes (Effects) and Filters fulfil just about what's to be expected from a digitising package – useful, but not essential.

Another feature of the new software, that users with low memory conditions will find a godsend, lies in the rendering options. Say, for example, you had chosen to grab an image at a resolution of 640x512. You might find you're unable to render it to the screen directly without running out of memory. You can now render it to disk at whatever resolution you see fit (low-res, super hi-res etc.).

Annoyingly, the option to download teletext still doesn't work with terrestrial broadcasts. You need a satellite dish to make use of this feature.

The last of ProGrab's capabilities worth mentioning only comes into its own if you've purchased the optional thirty quid (£29.95) PCMCIA interface.

This interface opens up the possibility of much faster grabbing (up to five times faster with monochrome and 3.5 times faster with colour images) than that normally associated with grabbing through the parallel port.



It also frees up the parallel port so that a sound sampler can be used to sample sound in conjunction with image grabbing. Theoretically, taking a series of frames while simultaneously sampling some sound should mean that the sound can be synchronised with the images on playback. In practice, this is difficult, though not impossible, to achieve, and can lead to some unintentionally hilarious results. Especially if you try to lip-sync the sound to someone's voice. With patience, it can be done.

> "Sharp, crisp and **faithful** to the original colours, we were mightily impressed."

So, does the combination of new hardware, new software, and new interfacing improve the unit's performance and boost its value for money rating?

The answer on all counts is a resounding yes. I put the unit through several tests that other units (now withdrawn from the market) have been unable to cope with.

Using a Panasonic Hi-Band camcorder and taking grabs of a subject wearing a loud red shirt with a deep blue T-shirt underneath produced admirable results. Sharp, crisp, and faithful to the original colours, we were mightily impressed. Although it must be mentioned that decoding times of hi-res images like this verges on the painfully slow with a 68020 AGA machine. The 68000 of the A600 sometimes seems as if it's packed up and gone home – make preparations to drink lots of tea or cola. Nevertheless, it still can't detract from the impressive results of the final image.

And now that we've reached the stage where a conclusion can be given, it should be mentioned just how much more flexible and alluring the new features have made the unit.

No matter what your present computing/video system is, this unit will fit into it seamlessly. You'll be able to teach yourself new techniques and experiment with images and image capture to your heart's delight.

So if you're just starting out and own no more than a video recorder, an Amiga 500, 600 or 1200, the ProGrab will enhance your prospects for creativity.

Conversely, if you own a king-corder like the Sony VX1 three-chip CCD and an accelerated Amiga, prepare to out-perform some of the lower-end digital cameras that the bods from Creative Review and Creative Technology magazines seem to think so much of.

Highly recommended. Whether you're a videographer or a graphic artist, look to the ProGrab 24RT Plus. It's a winner. ■

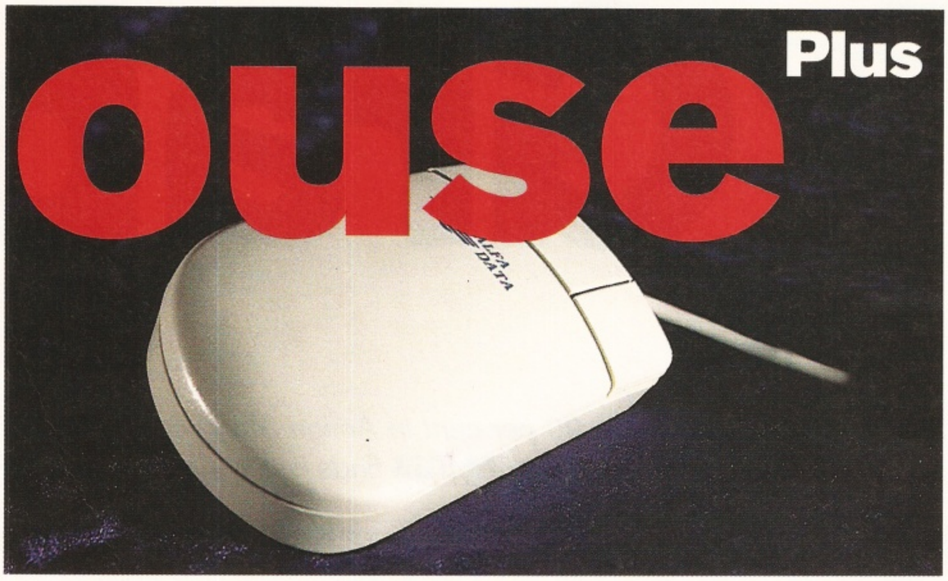
ProGrab 24RT Plus

A top performing digitising unit that could leave others in its wake.

Price: £129.95
Supplier: Gordon Harwoods
Contact: 01773 836781

Verdict: 95% Star buy

Mega Mouse Plus



It's just a mouse. Won't any old one do? The mouse might be the cheapest computer peripheral, but you should still be careful as **David Taylor** *explains.*

I have forgotten how many mouses (or is it *mice*) I've been through. The one that came with my Amiga is long dead and I was quite glad to see the back of it. Since then, I've used lots of different ones and they all react very differently. It seems that, as with all computer hardware, everyone has their own favourites.

I've always liked the original Mega Mouse from Golden Image, so I was very pleased to see a new 'Plus' version arrive. Like the original, this mouse is 400 dpi (dots per inch), which refers to the amount of physical space you must move the mouse to move the pointer across the screen. 400 is the top amount and means that you zip around the screen with ease.

At last, someone has realised that a good length of cable is much better than the usual fiddly two feet or so. This mouse, then, comes with a much more sensible eight feet of cable, which gives you more room for manoeuvre.

There is also a third mouse button. The left and right buttons remain the same, but another one nestles in the middle. Not a great deal of programs use this feature at the moment, but they are on the increase, from paint packages to file managers and once you've got used to it being there, you'll never want to swap back to a standard two-button mouse. I think we'll see more and more programs with compatibility for the third button, because it is so useful, so it's a good addition. Even programs that don't immediately support three buttons can make use of it, by installing a mouse utility (see boxout).

Although I can't fault this mouse, some people prefer mice that are ergonomically designed to fit the curve of a palm resting on it. "This mouse is too flat," moans a certain Graeme Sandiford. Personally, I think that's rubbish, because it fits my hand perfectly.

I am, however, disappointed to see a rise in price, albeit by a few pounds. The features of this mouse are what should be standard on all mice, but the world is not perfect and this is one of the few models that offers these 'extras'. My search for a new mouse is over. ■

Mega Mouse Plus

Price:	£15.95
Supplier:	Golden Image
Contact:	0181 900 9291

Verdict: 80%

Mighty mouse: Amiga Shopper's top 10 tips for a squeaky clean mouse

The humble mouse may be the cornerstone of the Workbench environment, but it is still incredibly easy to customise and even enhance your rodent pal. Here, then, are our top 10 tips for making the most of your mouse.

1. Get a mouse mat. OK, it sounds stupid, but a mouse mat is specifically designed to have a very slightly rough feel to it so that it grips the rollerball on the underside of the mouse and ensures that the mouse doesn't slip.

2. Keep your mouse clean. Again, it's simple, but effective. Turn it upside down and remove the shield that holds the rubber ball in place. Drop the ball out and give that a wipe. With the mouse upside down, you should see three rollers. Use a sharp instrument to carefully scrape away the build-up of dirt on the rollers, but be careful not to cut into the rollers themselves. Make sure you rotate them as you do this to clean all the way round, then pop the ball back in and replace the shield.

3. Altering the mouse's effect is easy for users of Workbench 2 or above. Open the Preferences drawer and double-click on the Input icon. Here you can alter the speed at which a double-click is recognised and also you can choose to accelerate the mouse, which will speed up its movement on screen. Make sure you tick the acceleration box to activate it. Accelerating the mouse on earlier versions of Workbench is possible by using a PD program, like QMouse.

4. There's no need to be stuck with a boring mouse pointer either. The Pointer icon in the Preferences drawer (Wb2) and the Edit Pointer in Preferences (Wb1.3) will allow you to redraw the pointer. Changes in Workbench 2 and above are stored in the Prefs/Env-Archive/Sys drawer. There is a separate file for each preference, e.g. input.prefs and Pointer.prefs. On Workbench 1.3 all preference information is stored in a single file called System-configuration in the Devs drawer. Should no other preferences be preset and a System-configuration file is copied to a Workbench 2 disk, these preferences will be used, as in fact is done on the Coverdisks for the Future pointer.

5. The Busy pointer that Workbench displays is rather boring, but you can use programs like PointerX to animate it and make a clock tick away as the Amiga works. Why not go even further and get a fully animated pointer? Yes, that too is possible.

6. Users with Workbench 2.1 or above will also have a Commodities drawer inside the Tools drawer. There are three commodities that concern the mouse. Autopoint will automatically select the window that the mouse pointer moves over, so you don't have to click in it to highlight it. Click To Front allows you to simply double-click on a window (in combination with a key press, left alt by default) to bring it to the front, instead of having to select the depth gadget from the top right of the window. Mouse Blanker will make the pointer disappear if you press a key (it re-appears as soon as you move the mouse), which is useful for typing.

7. Users who don't have commodities can use separate programs to do the same as those mentioned in 6. The blankers also tend to be time-operated as well, so the pointer disappears after, say, 10 seconds of inactivity.

8. Three-button mice exist, like the one reviewed here, but until recently have been largely ignored. There are, however, several programs, like Brilliance, that *do* make use of that extra button. Several utilities have also appeared in the PD to use a middle button to simulate keyboard presses. For example, if you were using the Click To Front commodity, you could set it to work when you double-clicked with the middle button down.

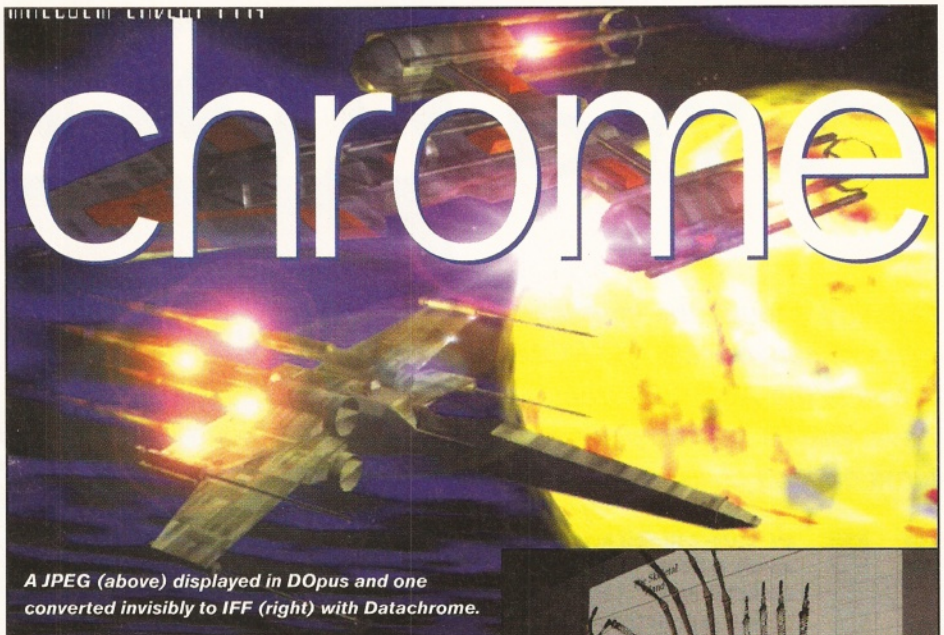
9. It is possible to use PC mice with the Amiga. They attach to the serial port, which means you need an adaptor and interpretation software (PD programs exist). It is not unusual for pointer information to be directed through the serial port. The graphics tablet, Tabby, for example, plugs into the serial port and offers you an alternative to a mouse, allowing you to draw the mouse movements on the tablet.

10. Computer mice are not real mice; they are an essential peripheral for use with a computer, not an unwanted house guest. So, never stand on a chair and scream when you see a computer mouse. It's embarrassing.



Some of the utilities mentioned here can be found on this month's ShopperChoice Coverdisk. There are also more of them packed on to this month's Subscribers' disk.

Datachrome


A JPEG (above) displayed in DOpus and one converted invisibly to IFF (right) with Datachrome.

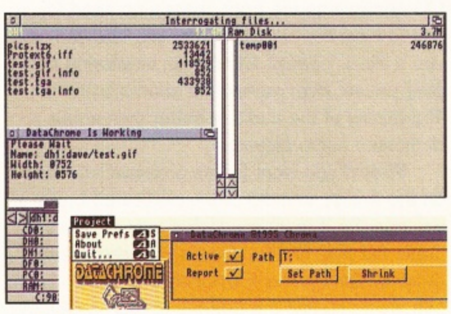


Yawn! A program that uses datatypes for file conversion. Gosh, how exciting! Not. Or so **David Taylor** *thought until now.*

Datachrome is a program designed to sit in the background and intercept certain filetypes, check for a relevant datatype, use it to convert the image to an IFF and then load it. For instance, you want to load a Targa or JPEG into DPaint. You can't. Start Datachrome and DPaint will load the image without a hitch.

There are costs. It takes time for the image to be converted, although it's worth noting that JPEGs take quite some time to load anyway. Datachrome also has to store the converted file as a temporary file. This is quick if done in RAM, but will reduce the amount of spare memory – you can set the temporary path to a directory, but this will slow things down.

It's a very simple concept – it enables programs to access datatypes to overcome their loading restrictions – and one that's easy to berate. "What a con. Is that all it does, etc., etc."



DOpus (top) thinks it's displaying the GIF on the left, but it is really showing the temp file on the right, thanks to the minimal-looking Datachrome.

Despite my first impressions, I've been converted [groan! – *Ed*] to the program. Suddenly, it's easy to show all manner of images in utilities like DOpus, or load images into WPs, paint packages or things that only support IFF.

The real reason that it's impressed me is because some actual thought has gone into its development. With the program running, any file that is copied from one place to another will be automatically converted to an IFF, which means that you can set up a batch conversion and leave it to it.

It goes further than this, though. When an image is intercepted and the temporary file is created (which is the file that the program really loads/shows), Datachrome remembers that image. If you then re-show the image, it immediately shows the temporary file; it doesn't re-process it. You can display a file and Datachrome will do the work converting it. If you then copy it, Datachrome takes the temporary file that it already has, instead of re-creating one. So, unless you move on to another image, the work on the file is done only once. This could have been further used so that if an image is shown in one package – which would invoke Datachrome – and then loaded into another, the temporary file would be used instantly. Instead, when swapping packages, the program interprets the image again. Shame.

There is also a CLI command, called Dataconvert. This can be used to convert files without Datachrome running, hence giving CLI users immediate access.

There are other drawbacks. Whilst you can shrink the GUI, you can't hide it, which is a bit annoying. Also, the program is a little over zealous. It lives to work and as soon as it spots a file, it gets going. A problem arises when you are loading a filetype that a program can already use, like a GIF into Viewtek. Datachrome gets there first and insists on converting it before displaying. The solution is to run Datachrome only when you want it. Add the program to a Workbench menu or leave the icon out.

As to speed issues, I'm starting to revise my opinion too. I've now got DOpus displaying JPEGs, GIFs, Targas, Postscripts... I can't say that I'd complain about the time, because it loads JPEGs pretty fast and GIFs and Targas almost immediately. I had no problems with the mainstream datatypes. Some of the more obscure ones, like the icon datatype, can cause problems, but you can't blame Datachrome for other people's developments.

I'm certainly keeping my copy on my machine – it adds a new lease of life to older programs. If you accept the limitations of datatypes, but want to make files more accessible, quickly and in multiple programs, Datachrome is excellent.

Datatypes

Let's be honest. Datatypes are a nice idea in theory, but they tend to be just too damn slow for practical use. Add the fact that they only have a top palette of 256 colours and they start to sound too boring for words. I'm not saying they don't have their uses. After all, it would be a bit hypocritical to include them on Coverdisks and then say they're useless! For use professionally and for use in commercial packages though, they do leave a lot to be desired – for instance, because of the drawbacks, Almathera are resisting adding datatype support to Photogenics.

But (there's always one), they are quite handy for allowing certain packages to access files that can't load the filetype directly. Most of the time 256 colours are adequate, the only time they aren't is for top level work. You may be surprised to know that a lot of the images in AS are in fact only 256 colours. The big bonus, of course, is that once a program can use datatypes, then you can use any filetype that you've got the corresponding datatype for. Since many of the datatypes can be found in the Public Domain, you can soon start using most filetypes.

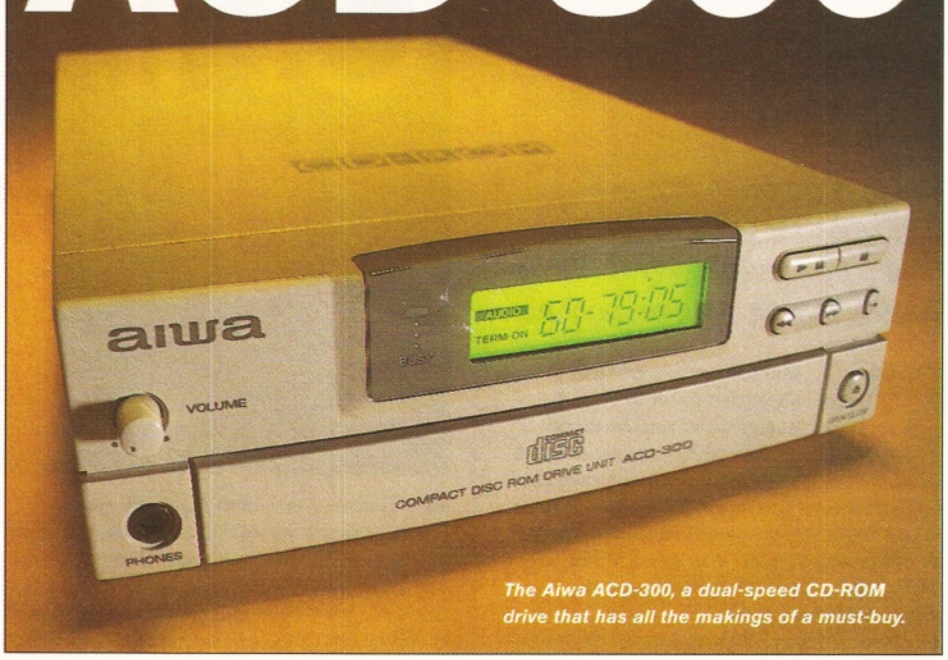
The hitch comes because for various reasons many programs don't support datatypes. It could be a conscious decision, as in the case of Photogenics, or because the program was written before datatypes were developed, like Directory Opus 4.

Datachrome

Price:	£29.99
Supplier:	Chroma
Contact:	01328 862693

Verdict: 82%

Aiwa ACD-300



The Aiwa ACD-300, a dual-speed CD-ROM drive that has all the makings of a must-buy.

Bursting through the mundane mass of second-rate CD-ROM drives is the ACD-300 from Aiwa. ***David Taylor*** *plugs in, turns on, and chills out.*

How often can you actually admit to being excited by a CD-ROM drive? Not often, believe me. Until now, most drives have been purely functional. If they worked, they worked and you couldn't really comment much past that. The Aiwa ACD-300 is very different. It sets the sort of standard that we should expect from drives, but have allowed to become the exception.

Allow me to explain. When audio CD players appeared, we got used to having an LCD, which would give information about the disc, what track was being played, the time remaining, any extras enabled (like 'repeat' or 'shuffle'). However, when CD-ROM drives appeared, everyone was so impressed by their presence alone that using them to play audio CDs was enough. It didn't matter that you had to have the computer running and use processor time to emulate a front-end for the audio CD player. We gratefully forfeited the separate controls and LCD without blinking.

> "This is the **best** dual speed CD-ROM drive I've ever seen."



The LCD offers useful information, especially on audio CDs, which have dedicated controls.

Now the ACD-300 has arrived and it's the sexiest CD-ROM player going, because it gives us everything back and more.

It has an SCSI-2 connection that means it's just a case of plugging it into your interface (e.g. a Squirrel on an A1200). Make sure that you've got the correct device to access the drive, which should have been set up when you installed the software for the SCSI interface.

The drive itself is dual-speed, which is the current standard – although with quadruple and sextuple speed CD-ROMs appearing, who knows for how long? As such, like any CD drive, it works, and I had no problem accessing and retrieving data. The on-board 256K buffer makes transfer stable, but no faster than you'd expect from a dual-speed drive – though playing animations directly from the CD is smooth.

There's also a DIP switch which allows you to use auto-termination of the SCSI chain, select standard or dual speed and enable parity checking. There are the obvious audio out jacks at the back, which should allow you to hook the audio up to either a monitor or a stereo. There's also a volume knob and headphone jack at the front.

The LCD display shows what type of CD is in the drive and gives some pertinent information, such as whether the internal SCSI termination is active. If there is a CD-ROM in the drive, the display shows you the SCSI ID number, which saves you the trouble of finding out. Photo CDs make it show the number of sessions on the disc, and this is the only way of finding that out! Both of these displays are of some use. If you are constantly trying out new CD software, then it's easier to have the ID number staring you in the face. Knowing how many sessions you've got free on the Photo CD is helpful too.

Audio CDs get the most out of the display, with all the information you'd expect from a standard audio player. It gives the number of tracks and running time as well as options enabled. Because this CD drive physically has CD controls on the front, there's no need for you to have the computer running. You can just use it like a 'normal' CD player, employing the play, pause, skip, repeat and shuffle buttons. The quality of the audio is better than some dedicated audio players.

Should you want to use a control interface on the Amiga, instead of the dedicated buttons, you can. So if reaching all that way across to press the play button fills you with dread and despair, don't panic. Obviously you can't mix the two, so if you use the buttons to start a CD, the interface on the computer can't stop the player and vice versa.

This is the best dual-speed CD-ROM drive I've ever seen. It is very well constructed. Where some drives have a very cheap-looking tray loader, this one looks sturdy. When you consider everything that this drive has to offer, even if that is what we'd like to see in all drives, it's definitely worth the extra cost above the price of a more mundane one – even if you just want it to impress your friends. If you don't have an audio CD player already, then this solves all your CD needs. Hmm, maybe we could see a version with a remote control? Top notch. ■

Aiwa ACD-300

Price: £169.99
Supplier: First Computer Centre
Contact: 0113 231 9444

Verdict: 90% — Star buy

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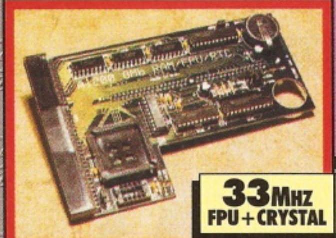
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CD-ROMs

They're silver, shiny, round spinning disks and they just keep on coming. **David Taylor** *chooses some of the highlights from this month's CD selection, including an animation disc and a CD full of 'babes'.*

It's starting to get a little staid on the CD front with more of the same month after month. But there are still some good titles around and newcomers to the market will always find something to smile about.

Multimedia Toolkit 2

Multimedia, eh? I've heard that word a couple of times. This is a double CD set that aims to provide you with everything you'd need for any type of application.

To that end, there are some utilities, such as LightWave support programs, and even the full version of OctaMED 5.04, but the real meat of the disc lies in the support. There are 3D objects, Imagine attributes, MIDI files, samples, modules, clip art, fonts and images. The texture files for 3D can be dismissed immediately because they are taken from a PD collection that's easy enough to get hold of – besides, there is only one contender for textures, Texture Gallery (AS52). This is a problem that is resounding all around the CD world and very evident in this CD – we have seen it all before. There is little original stuff here. Sure, there's a great deal of very good stuff, but anyone who's got several CDs will already have most of it.

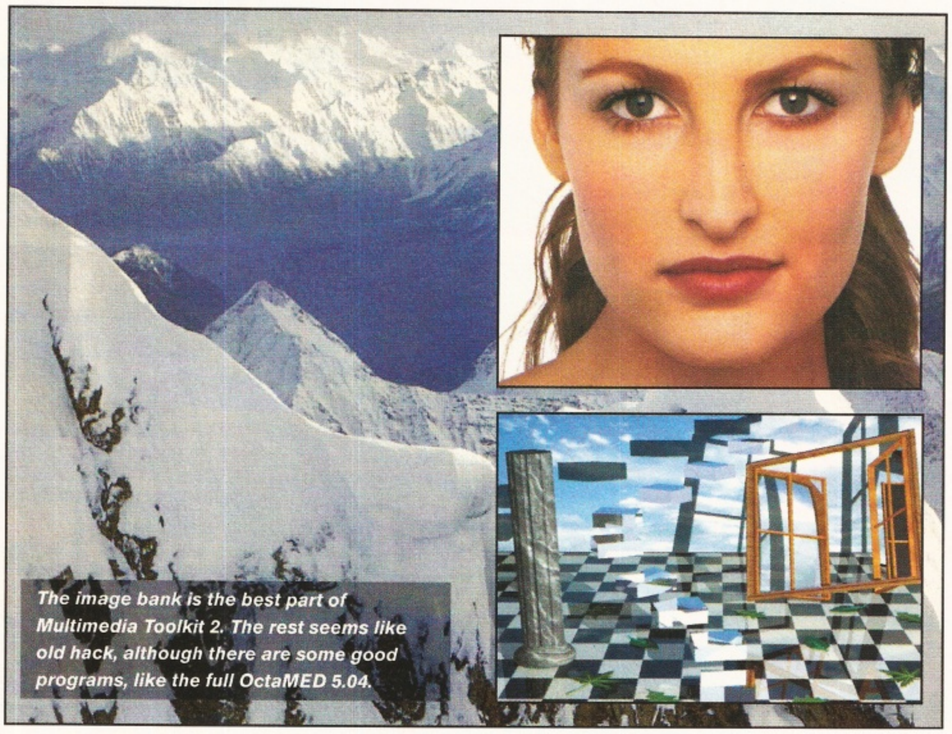
The CD's redeeming feature is the image bank, which has lots of quality pictures, all sub-grouped with index images to help you find the picture you want. I doubt this will be enough to tempt the seasoned CD buyer though, because there aren't enough new programs on it. As I seem to end up saying every month, if you are just starting and need a CD that will give you a solid base, then this one is fine.

Perhaps the reason I reach the same conclusion is because the CDs themselves are pretty much the same? Wouldn't it be nice if, just one day, something new appeared.

Multimedia Toolkit 2

Price:	£29.95
Supplier:	Weird Science
Contact:	0116 234 0682

Verdict: 70%



The image bank is the best part of Multimedia Toolkit 2. The rest seems like old hack, although there are some good programs, like the full OctaMED 5.04.

Makin Musik

Groan! Yet another music CD. These babies are becoming more regular than my Aminet releases. "If you enjoy music then we are sure you will enjoy Makin Musik," says the blurb. Yeah, sure. "I know where I'd enjoy shoving Makin Music," I thought. But, doing my duty, I threw it into the drive to have a look and...

Brilliant. CD Exchange have not simply thrown together a CD as I'd expected. They fully credit all the authors of the programs, which is good to see. The utilities are split into appropriate directories, making anything easy to find. There are sample utilities, module players and editors, CD audio utilities and demos of commercial software.

There are MIDI Sequencers to let you play the MIDI files on the CD or produce your own.

There are hundreds of modules, giving you a good library of pre-made tunes and the samples are excellent and again well split into different types and themes in different formats. Quality is very high, not surprising since the samples were made with the help of Akai UK.

If you already have a music CD, then you're not going to find many, if any, new utilities and programs here, because it's the usual selection from the PD. They are as good as ever, but we've seen them many places before. If you are without a music CD, this one has been thoroughly compiled and at least contains some original work in the samples. A pity it's five pounds more than the usual £20, but it's the best yet nevertheless.

Makin Musik

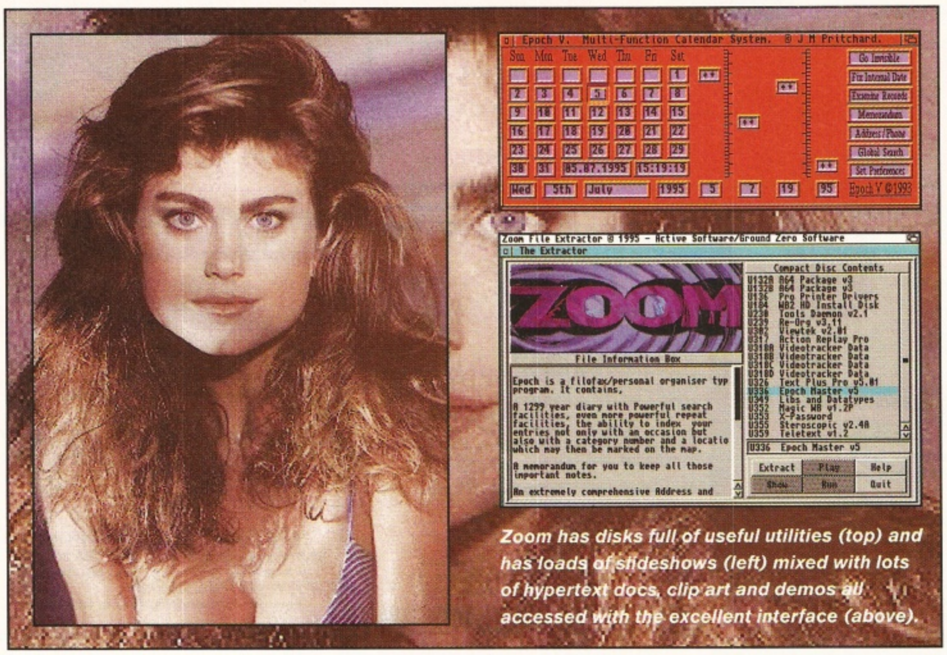
Price:	£24.99
Supplier:	CD Exchange
Contact:	01603 261060

Verdict: 90% Star buy

Aminet 6

The Aminet series has been a favourite of mine for quite some time. If you are looking for a Shareware program, then Aminet is the first place to try. And with the first four discs being sold as a bundle, it's easy to get the whole Aminet library, normally only accessible with a connection to the Internet.

This CD, though, is a disappointment, the problem being that the fifth disc was released



Zoom has disks full of useful utilities (top) and has loads of slideshows (left) mixed with lots of hypertext docs, clip art and demos all accessed with the excellent interface (above).

not that long ago and given the current Amiga situation, coupled with the fact that this is traditionally a slow period for software (everyone's having too much fun in the sun to stay in programming), another CD isn't really justifiable. There are some excellent programs and utilities here, but it could be argued that the release is aimed at keeping non-Internet users up to date for a small price, or that it's a cash-in.

If you've got number five, there's little point investing in this one. If you missed the last disc, you might be interested.

Aminet 6

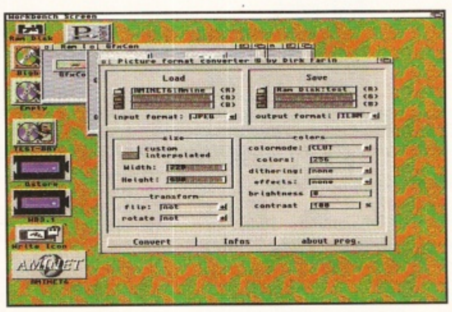
Price: £14.95
Supplier: Weird Science
Contact: 0116 234 0682

Verdict: 70%

Zoom Vol. 1

The general problem with CDs is that since they contain so much storage space, they are often cobbled together with everything thrown on in the knowledge that everyone will like something. Occasionally, though, a CD appears that has been professionally compiled – Zoom is one.

The CD is split into various areas, making it easy to navigate with a file manager. Better still is the interface that I can't commend highly enough. All the files have been packed as DMS archives, which unpack on to floppy disks – you can't install them directly to a hard disk (although with a bit of effort on your part, you could install to a recoverable RAM disk). As you scroll through the index, each DMS has a description to help you decide whether you want to take a look or not. The files are grouped together in areas, but I wish the index had been split into areas as well, instead of having to scroll down a very long list – a minor complaint. If you do want to get the disk, you can click on Extract and the process will be automatic. This makes the CD very easy to use and yet still packed with loads of goodies. The use of DMS was a good idea on a CD, because of the speed – unpacking a Gig of Lha or LZX files could take a lifetime.



Aminet 6 is a bit too little a bit too soon. There is still lots of great stuff to be found, though.

The files themselves are worthwhile. Although you may have seen some of the utilities before, there are some new ones here. When they are programs that have been around, at least the CD's creators have made sure that they are the latest version. There are also loads of slideshows (a hell of a lot of 'babe' shows – which aren't 18 certificate, so don't get too excited, especially as the quality of the images isn't that high) and demos (the creative kind). In addition, they've selected and categorised a large selection of clip art and Imagine objects.

All in all, some originality, but certainly a lot of effort have combined to make Zoom the best CD release of the month. On a flippant note, the CD itself looks great too!

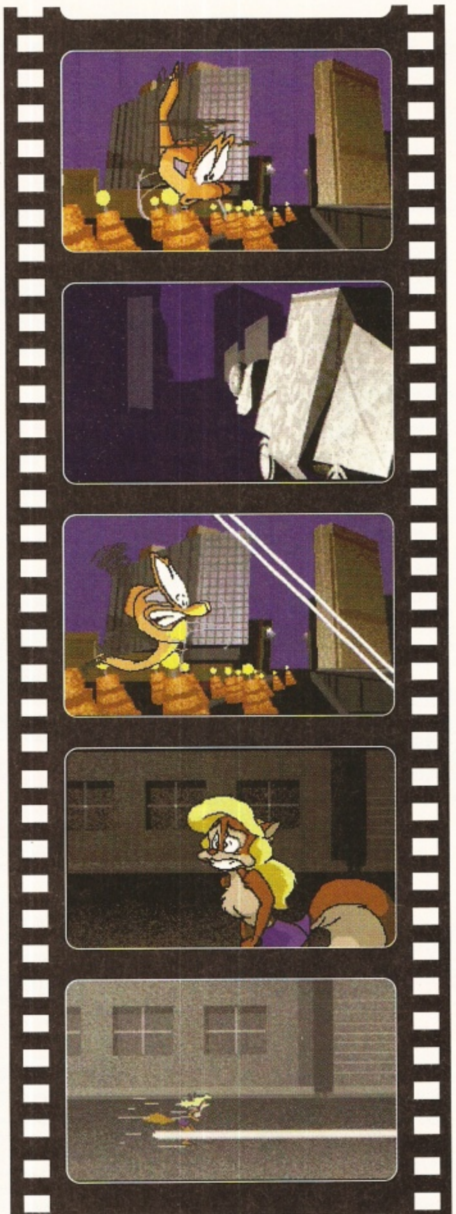
Zoom Vol. 1

Price: £19.99
Supplier: Active Sofware Ground Zero
Contact: 01325 353360
0117 974 1462

Verdict: 92% Star buy

Animations

This is a double CD which is full of, wait for it, animations. What can I say? The animations are in various formats and should run direct from the disk, although some require lots of RAM (over 10Mb). I had a few problems with the viewers, which wouldn't load or thought they couldn't find the guide, when I tried to play directly from the menu. This could be solved by copying it to RAM. Hmm, maybe it was just a quirk in the programming?



The Animations double CD set forms an ideal library for animators, full of both Amiga and PC animations (all viewable on the Amiga), including the Amy anims (above). Some require lots of RAM.

This doesn't have many animations that you haven't seen before, but it is the comprehensive animation collection. If you're an animator, then your library disc has arrived. ■

Animations

Price: £19.95
Supplier: Weird Science
Contact: 0116 234 0682

Verdict: 70%



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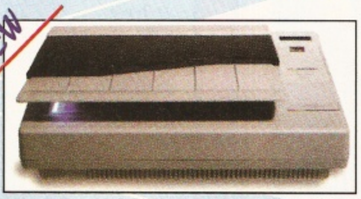


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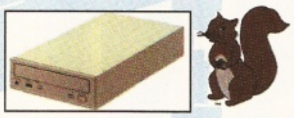
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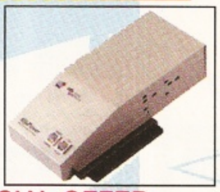


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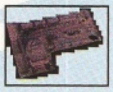
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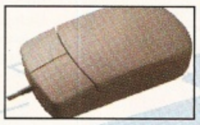
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● **40MHz** Warp Engine with 8Mb, Fast 60Mb RAM and SCSI-2 for Amiga 4000, £1,000 o.n.o. Phone Tim on ☎ 01305 267468 for more info.

● **Imagine** V3.0 complete £80. Datel hand scanner, boxed, £80. All perfect condition. DPaint IV non-AGA £20. Deluxe Video V.3 £40. Call Trevor on ☎ 01842 764038.

● **Chess** disk, 400 A4 pages of text. Send 3.5" disk & 50p return postage for free copy. 20 chapters & demo pictures included. Contact: Raymond Reid, 9 Grange Manor Avenue, Rathfarnham 16, Dublin.

● **Amiga** 500+ with 40Mb A500 hard drive plus second Cumana 3.5" drive, £100's worth of software. Analyse Scribble Graphologist, GBRoute, Poolmaster, Cashbook, Home Accounts, inc. manuals, colour monitor £395. ☎ 01253 739002/796027.

● **Amiga** 1500 ECS WB3.1 10845 monitor £200. GVP 030/40 accelerator + 8Mb RAM £300. 50Mb HD £40. Piccolo 5064 graphic card 2Mb £250. Call Peter on ☎ 0171 2321713.

● **Software,** boxed as new £5 each: Lemmings; Monkey Island; Sensible Soccer; Chaos Engine; Zool; Street Fighter II; Elite 2; Alien Breed; Gods; Magic Pockets; Project X; Chessmaster 2100; Deliverance. Call Ian ☎ 01727 868800 anytime.

● **Serious** software boxed as new: Devpac 3, Assembler £30; Power Basic £20; Digita Money Matters £15; GP Fax £15; Complete Amiga C £15; Ultimate Amos £15. Call Ian ☎ 01727 868800 anytime.

● **Satellite** hacking kit. Decoder and smartcard emulation hardware. Connects to serial port. Offers? ☎ 01385 384749 anytime.

● **A4000/030,** 4Mb 130Mb H/drive, 68882 40MHz FPU, two external drivers, joysticks, over 300 disks of various software, books, AF issues 13-73, £1,050 o.n.o. Tel. Mike ☎ 01502 537589 (No timewasters please).

● **Citizen** 240C colour printer, B/W and colour ribbons, Citizen Print Manager software, excellent condition, boxed with manuals. £125 o.n.o Tel. Stuart on ☎ 01934 632012 evenings.

● **Real 3D** V1-4B for raytracing and 3D animation using HAM for smooth colours. Ring Steve on ☎ 0181 4500907 evenings.

● **Kernel** manual (LIBS) third edition, AmigaDOS manual (BANTHAM) third edition, Hi-Soft Basic 2 – brand new. £75 the lot. Phone David ☎ 01403 270592 (West Sussex).

● **Amiga** 1200, 80Mb hard disk, Power 1230, Accel MMU, clock. 4Mb RAM, external floppy drive, mags, disks, Brilliance, AMOS, Blitz, Imagine 3, books, SVGA monitor. Contact Edward after 5pm weekdays on ☎ 01434 608748.

● **A1200** 50MHz 030 FPU MMU, 6Mb RAM 420Mb HD, two floppy drives, £1,000 or exchange for high spec A3000 or low spec A4000. Also monitor, RG3TV printer modem on asking. Phone Paul on ☎ 01702 547067.

● **VBS** video back-up store 150 disks to tape or back-up hard drive £30, V1.5 or V3.0 p+p free. More info on ☎ 0161 7900962.

● **A4000/030,** 5Mb RAM, 214Mb HD, CD-ROM, Microvitec 1438 monitor, SCSI card, software, games, £1.150 o.n.o. CD^{32} + games £130. Imagine 3 + video £70, Brilliance 2 £30, Adorage 2 + video £25. Contact David ☎ 01661 824663. (Newcastle.)

● **US Robotics** 9600 Worldport modem, ideal beginners' modem. Upgrade forces sale hence only £50. Tel. Jeff ☎ 0171 5116872 after 6pm.

● **Rotec** Rocgen Plus genlock, boxed with manual £90, or exchange for Scala MM300. Call Terry on ☎ 01706 211335.

● **Rocgen** Plus genlock for use with any Amiga. Mint condition, still in box and complete with manual. Upgrade forces sale £99. ☎ 01484 844009 David – Huddersfield area).

● **Ferguson** 811, 8mm camcorder complete with manual 200m, manual focus, remote control and 10 tapes. Mint condition, two years old (three years warranty left) £399. ☎ 01484 844009 David – Huddersfield area).

● **Amiga** 4000/030, 4Mb RAM, 120Mb hard disk, any reasonable offer considered. ☎ 01252 545643.

● **A4000/40,** 10Mb RAM, 120Mb HD, Oktagon 2008, 1950 dual synch monitor, 10855 monitor, CDTV, software and other bits £2,000. Phone David on ☎ 01462 743145 evenings.

● **Amiga** 1200, 6Mb, GVP 68EC030 accelerator. 40Mb hard drive. Will swap for accelerated 1500 or 2000 or standard 3000 or 4000. Call ☎ 01702 461334. Must be Workbench 2+.

● **Miracle** Piano teaching system, Amiga program disks, Nintendo ES, as new £100. ☎ 01373 826939.

● **Amiga** 4000.30, 4Mb, 120Mb HD, all boxed and complete as new and extras, Zorro, slots, B/B clock, HD floppy, cost £1,200, sell for £500 inclusive of postage. ☎ Yeovil 01935 25974.

● **A1200,** 40MHz 030, 4Mb simm with monitor, 120Mb HD also printer, VIDI Amiga 24RT, plus various games and other software. All for £1,250, but may split. ☎ 01562 67587 after 6pm.

● **A1500,** WB2.p4, 7Mb, 180Mb HD, A2620 accelerator, flicker fixer, 1960 monitor, bucket, loads original software £650 o.n.o ☎ 01227 792417.

● **A500+,** 2Mb, Chip RAM, GVP series 2, 40Mb hard drive with 4Mb Fast RAM, both items excellent condition, all for £200 or will swap for A1200, 4Mb RAM expansion (Surrey) ☎ 0181 2241917.

● **SAS/C** development system with C++ V6 £95 o.n.o. Cygnus Ed £20. Devpal 2 £20. All boxed as new. Call Alan after 5.30pm on ☎ 01202 524267.

● **Amiga** 1200, 2Mb RAM, 120Mb hard drive, disk drive, mouse, joystick, manuals, all boxed as new. Word processors, accounts, arts packages, plus loads of games. Bargain at £400. ☎ 01643 831513.

● **Amiga** CD^{32} boxed as new, complete with games, excellent condition, £150 o.n.o. ☎ 01643 831513.

● **Wordworth** V2 AGA £20. PageSetter 3 £15, scanner £25, PC emulator power board for 500 also gives extra .5Mb memory £20. All boxed and in excellent condition. ☎ 01643 831513.

● **Amiga** Format and Shopper magazines and demo disks, also CD^{32} mags, large pile, bargain at £25. ☎ 01643 831513.

● **A4000/40,** 10Mb, RAM 240Mb IDE, 1942 monitor, £1,250. A2091 SCSI £40. GVPHC8 SCSI +2Mb RAM £75. 25 x CD-ROMs £100, GVP I/O extender £80 Phone Derek ☎ 01450 375081 (Scotland)

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● **Videoscape** 3D, Scala, Art Dept and plenty of other utilities on over 100 Coverdisks and 58 magazines from '92-'95, £40. Buyer collects. Ideal for beginners. ☎ 01908 691439. Offers accepted.

● **Amiga** 1200 as new, only £250, CD^{32} £120. Colour stereo monitor plus leads £100, boxed software cheap e.g Steel Sky £8, Indiana Jones, Monkey 2 £7. Pease call ☎ 01956 558024.

● **XERPX** 4020 colour printer. Gives strong colour output. Excellent condition, little used, complete with lead. Inc. six large rolls of paper £250. ☎ 01844 279761.

● **Amiga 3000** complete with Magni genlock. Philips screen. Rombo Vidi 2. Broadcast Titler, Paint, plus other progs £600. ☎ 01753 887565.

▶ 54

53 ● **A4000/30,** 6Mb, 120HD, 25MHz 68882 FPU 1942 monitor, Imagine 3.0. Sensible offers considered. ☎ 01642 679888.

● **CDPD1,** CDPD2, DEMO1, and Pandora's DC's for sale. £4 each or £15 the lot. Amiga Shopper 1-50 with disks £35 the lot. Phone Mario after 6pm on ☎ 01203 386947.

● **Wordworth 2** and Digita Print Manager £10. Deluxe Paint IV £10. Micro English £5. F15 Strike Eagle II and Flashback £10. Phone Richard ☎ 0181 4523389 evenings.

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● **A1200,** 10Mb RAM, 85Mb hard drive, 40Mhz GVP, A1230-11 + FPU. Imagine 3, ImageMaster, Brilliance, VistaPro 3. £775 (may split board). Phillips CM8833-11 monitor £155. ☎ 01626 821315.

● **A500** 1Mb, VGC plus LC10 colour printer. ☎ 01732 762142.

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● **Phillips** CM8833 MkII monitor in excellent condition £120. Call ☎ 01243 773574 evenings.

● **CD^{32},** two games, CDPD3, demo disk, as new £150. Also Supra 14400 LC modem, all cables and software, £100. Call Jon on ☎ 01954 789503. Can deliver around Cambridge area.

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● **DPaint IV** AGA, £25 or swap for Photogenics. Contact Colin on ☎ 01482 844388 after 10.30pm.

● **Overdrive** casing includes power supply, case, PCMCIA interface, fully boxed. £50 o.n.o. Call ☎ 01422 205725 and ask for Guilherme.

● **AMOS,** AMOS Compiler, AMOS 3D £10 each, Wordworth AGA £10, Technosound Turbo £10, various games £3-£8, includes Body Blows Galactic AGA o.n.o. Call ☎ 01422 205725 ask for Guilherme.

● **A3000,** 14Mb RAM, OS3.1, OpalVision. latest ADPro, Morph + CDFS. SCSI CD-ROM, 100Mb HD. Newest Buster and SCSI chips. Three-button mouse, £1,200. Microvitec 1438. I0 months warranty £250. Phone ☎ 01284 762219.

● **Power** Computing PC108 RAM expansion for A1200. No RAM but includes a 68881 FPU. Only £55. Contact Tony on ☎ 01203 637343.

● **A4000/040,** 6Mb, 120Mb HD, 1942 monitor, Canon BJC600 colour printer, loads of programming inc. Wordworth 3 and ADPro, £1,850. May consider splitting. Phone Jerry ☎ 0191 2733739 evenings.

● **A500** Plus, 5Mb RAM board, no mouse, no joystick £100 + postage. Metallic cover for A500 to take monitor £10 – too heavy to post. Amesbury area. ☎ 01980 622034.

● **AMOS** package plus 20 disks, PD and updates, offer software, hardware or cash. Phone ☎ 01708 381033 (Essex).

● **Amiga** 500 1.3/2.04 ROM/Switch 0.5Mb Chip, 0.5Mb Fast RAM £180. AS90 20Mb HD + 2Mb Fast RAM £210. Phillips 8833Mk2 colour stereo monitor £100. Or £430 for all. Phone Brett ☎ 01480 455391.

● **A1200,** 80Mb HD, 1.76Mb external FD, Devpac 3, games, programming books, £350 o.n.o. ☎ 01703 254796.

WANTED

● **A4000,** 68040 processor card, will pay up to £250. Also Emplant emulator card, will pay up to £200. ☎ 01263 722169 ask for Richard.

● **Manual** wanted for PageStream 2, phone Arthur ☎ 01753 862447 anytime.

● **A4000,** 040 card. Willing to pay up to £350 for full 68040 and £250 for 68LC040. Photogenics – pay up to £25. Contact Colin on ☎ 01482 844388 after 10.30pm.

● **Humanoid** for LightWave. Phone Norman on ☎ 0191 4873457.

● **Wanted:** Panasonic AVES Mixer £400 offered. Also DeskJet 500 printer required (working or not) ☎ 01270 876196.

● **AMICDFS** CD-ROM driver software or similar for 1200+ GVP 1230+ SCSI-INT+ Apple CD-ROM. Also for sale DeluxePaint IV AGA (cost £60), boxed as new, £25 inclusive. ☎ Yeovil 01935 25974.

● **A3000.** any configuration wanted. Tower is designed but regular 3000's will not be turned away. Will give up to £800 depending on peripherals and hardware on model. Call Simon on ☎ 01960 382307.

● **MIDI** keyboard, must be nice price. Also LightWave 3.5 only with reg card. Call Jeff on ☎ 0181 8558286 (S/E).

● **Amiga** 500 contact. I'm fairly new to the Amiga scene, so I would like help, hints for game cheats and general Amiga 500 use. All letters get answered without delay. Write to: Stevie, Flat 3, 13 St. Mary's Road, Lemington Spa, Warks.

● **Emplant** with SCSI for Amiga 4000, will pay about £180. Also wanted, an 040 processor, will pay about £200. Phone Richard on ☎ 01263 722169 or writeto: Richard Brown, 13 Russell Terrace, Mundesley, Norfolk.

● **CU** Amiga magazine, Feb '95 issue with original Coverdisk (Directory Opus 4/Crystal Dragon) – Good condition. Will pay cover price plus postage. Write with details to: Steve, 176 Norwich Road, East Dereham, Norfolk, NR20 3AY.

● **I have** recently started my own PD company and I'm looking for customers. Send a first class stamp for a free list to: Pikes Cottage, Ashmanswork, Newbury, Berks, RG20 9SJ. PAUL.

● **Instruction** book for A590 hard drive (or copy of). Will pay any costs incurred. Also PD hard drive prep disk. Phone Gordon on ☎ 01382 580674.

● **Amiga** contacts wanted. Send lists to Adrian Richings, 1 Llanfair Hall, Caernarfon, Gwynedd, LL55 1TT

PERSONAL

● **Wanted:** Talented programmers and Pixel artists in order to form a new BIG thinking development outfit. North Manchester area preferable. Contact Ben Gonshaw on ☎ 0161 7665433.

● **We need** London-based; LightWave, Real 3D, Imagine or 3D Studio graphic artists. Also wanted PC, C& C++ programmer for game production. Ring Raj on ☎ 0181 5904572.

● **Graphics** man looking for commercial or PD work. Fluent with DPaint, Imagine etc. Call Stuart Collins on ☎ 01454 411419 after 6.30pm and I will send you a demo of my work.

● **Special** message to all London LightWave and Imagine users. Call me if you want to make excellent graphics in 3D. Also wanted PC, programmers C & C++. Call Raj now, ☎ 0181 5904572. (PC Games Production).

● **Females** required for Amiga users group. Members various ages from Middlesex/Herts and surrounding areas. Please write to DAZZ, 25 Petunia Court, Dorrington Close, Luton, LU3 1XT.

FANZINES/BBSs

● **Draught** Flow BBS. Nine CD-ROMs online, including latest Aminet, Goldfish, Goldfish 2, Hottest 4, Hottest 5. GIFs Galore etc. No ratios. Free downloads at 28,800 and free Internet mail access on ☎ 01707 328484.

● **007** James Bond BBs 6pm-6am Mon-Fri and all weekend. Amiga and PC files and mail friendly SysOp and CD SysOp. Contact George & Sharon on ☎ 01563 524197.

● **Aurora** BBS contact Pierre Menguy ☎ 01942 709263 7am-7pm weekdays, 12pm-7am weekends, online CD's immediate access NYNEX line, Golborne, Lancs.

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● **Devils** Desire BBS. Amiga BBS, 24 hours a day, seven days a week. ☎ 0181 6898004.

● **Witzend** BBS, 24hrs a day. ☎ 01702 556838, contact Darren Fooks (SysOp). ■

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Double Dealing from HiSoft!

Exclusive Hot News

Following a lengthy investigation, we have discovered irrefutable evidence that Amiga publisher HiSoft is engaged in double-dealing. Although the company is known for top-selling titles such as Devpac 3, Megalosound and Squirrel SCSI, it now seems that HiSoft is prepared to offer a number of these professional packages bundled together at prices that can only be described as suspicious.

Our reporter gained an exclusive interview with David Link, of HiSoft, who made this outrageous claim: *"We have been supporting the Amiga community for 10 years now with a range of software and hardware packages. As a thankyou to all the loyal supporters of this amazing computer, we decided to make some very special 'birthday' offers to readers of this magazine."*. Double-talk? We'll leave you, the reader, to judge …

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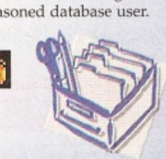
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Amiga Format 93% CU Amiga 94% Amiga Shopper 95%

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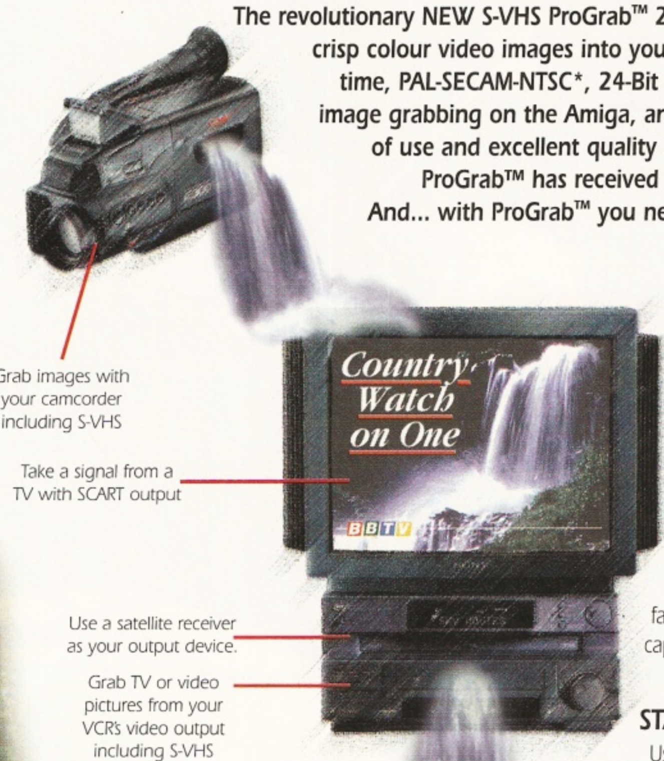
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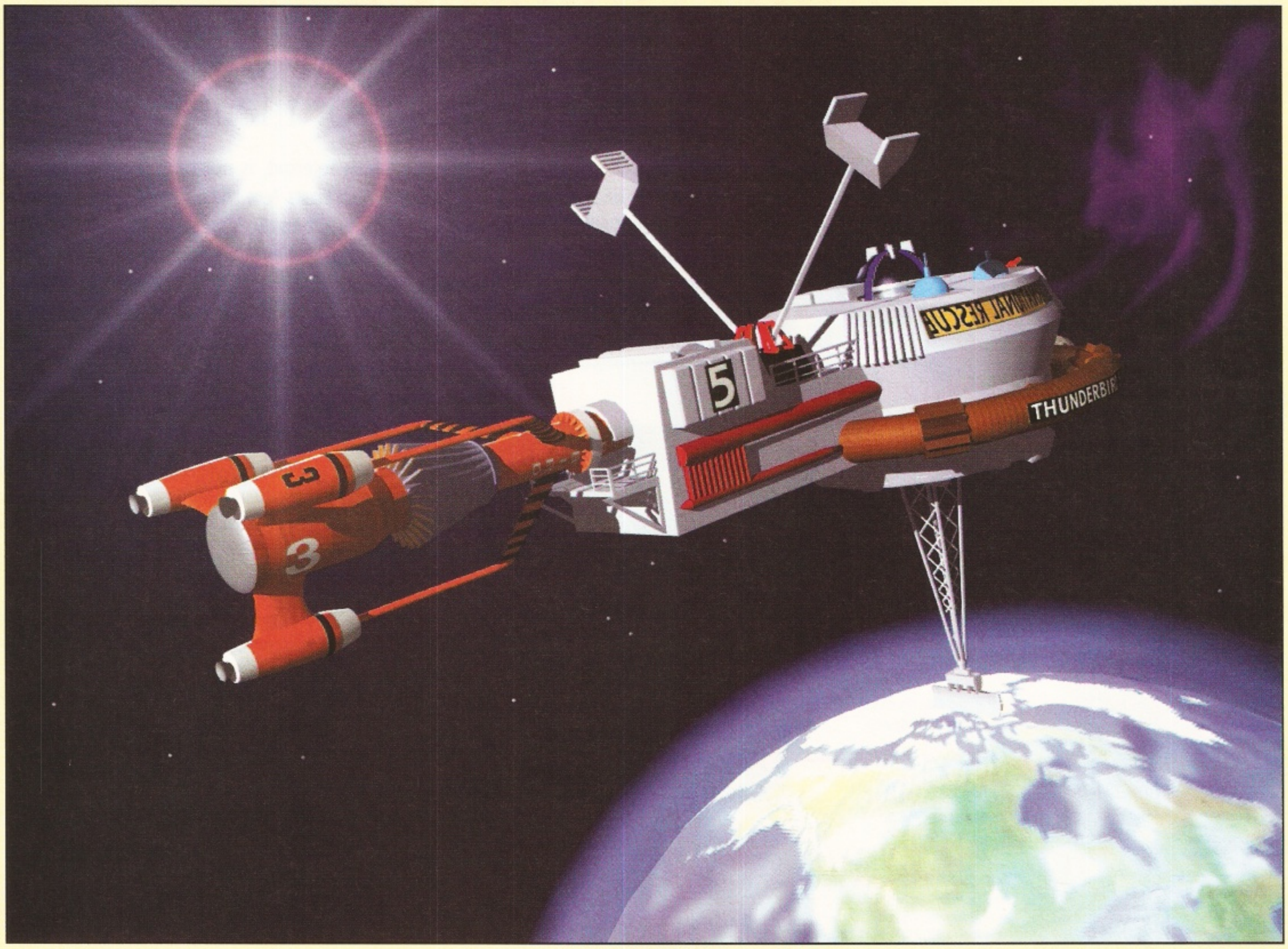
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This month's winner is Steve Whalley who created these Thunderbird 3 and 5 rescue vehicles. The picture took one hour and 34 minutes to render in LightWave 3.5 on a 28Mhz 040 at a resolution of 1600x1200. If you want to win £25, render or draw a picture, save it as a JPEG and send it to: **David Taylor, Future Publishing, 30 Monmouth St, Bath BA1 2BW.**

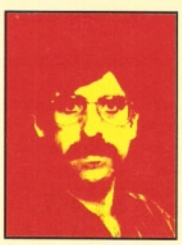


Welcome to the ever popular Answers section where we attempt to rub ointment on your Amiga's wounds. We've tried to make sure the mix of Answers helps everyone, with technical queries from experts sitting alongside beginners' questions. So, there should be something for everyone. Only by helping those starting out can we expect them to become more competent.

The team are biting at the bit to get started, so I'd better toddle off and let you get on.



Paul Overaa is our Operating Systems programming expert. He has written several books, including: Mastering Amiga Assembler, Mastering Amiga ARexx and Mastering Amiga C. His main interest is in program design and he is heavily into the music-side of the Amiga. Paul's other interests are red wine, maths and wind-surfing!



Gary Whiteley is our expert on video and graphics. He regularly produces work for films and TV. Gary has also written books – amongst them is Amiga Desktop Video, published by Future Publishing. Gary also regularly reviews new products for Amiga Shopper – if you turn to page 32, you'll find out what he thinks about TVPaint 3 as part of our Supertest this month..



John Kennedy is our hardware and music expert. John has been reviewing lots of stuff for Amiga Shopper in the past. To mention but a few, he reviewed the brilliant Squirrel in issue 48, wrote our huge CD-ROM Supertest in issue 49 and gave both GoldenGate2 (AS50) and Cyberstorm 060 (AS51) Star buys. And he will write our comprehensive music Supertest next month.



Larry Hickmott is our DTP and word processing expert. He produces his own DTP magazine called Em and has written several books on his favourite topic. He has just finished a book called the Wordworth Companion for Digita and Future Publishing's books division. He has written our review of ProVector 3 this month (see page 38).

AMIGA ANSWERS

Some of you have written in saying that you find the Answers section a little too technical and specific. This month, then, we've tried to broaden the complexity of problems we've dealt with to include answers for all levels of users, from beginners to experts.

Hard drive lights out



I have an A4000 fitted with a Seagate ST3144A. Occasionally on startup, the hard drive light comes on, but the machine does not boot. If it is left, the animated disk scene appears. The drive light remains on, and eventually, after some time, the hard drive operates and the light goes out. When soft reset the Amiga boots okay. This does not happen every time, only occasionally and most times it works fine. I intend to add another 420Mb drive as a slave – do I need to buy the same type of drive, i.e. a Seagate?

Will this mean that if a CD-ROM drive for the A4000 is ever released, I will need to discard one of the hard drives to accommodate it?

Mr L. J. Long
Gosport, Hants

You are not alone: several A4000 owners report that their machines occasionally refuse to boot. Various explanations have been put forward, but it is reasonably clear that it is a flaw in the drive mechanisms. I've heard stories ranging from timing discrepancies to reports that the bearings in the drives sometimes get too cold, and the drive can't spin up to speed properly. There isn't really anything you can do other than trying to keep your Amiga on all the time, or in a room which doesn't get too chilly.

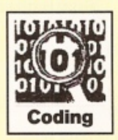
The good news is that fitting a slave drive sometimes seems to cure the problem. Certainly the newer drives (such as the 420Mb drive you mention) all boot fine by themselves – and the current price of 1Gb IDE drives means you might be able to simply throw the original 120Mb drive away altogether.

You don't need to use drives of the same make – for example, my A4000 has a Seagate and a Connor installed. In rare cases, the Amiga will refuse to boot from cold, depending on which drive is slave and which is master: it can take a bit of experimentation to get it right. ***John***

Answers contents

If you are looking for a solution to a particular problem, why not try using this handy index to the questions in this issue. It's arranged by topic, so if you are being kept awake at night by a noisy hard drive, then be on the look-out for any mention of hard disks.

Running multiple AMOS modules



I'm having trouble with memory in AMOS with my A600. What I want to do is run a program from a program. I'm using the "Run Filename" command within one program to call up another. However, after the second program has loaded, I run out of memory.

How can I get rid of the first program once it has called the second program?

Dave
Hartlepool, Cleveland

This method of running multiple programs is called 'chaining' and, in fact, AMOS will as a matter of course remove the first program and its variables from memory automatically whilst loading the second program.

What AMOS does not do, however, is remove the screen and memory bank definitions that are in place and I suspect that your problems stem from the fact that your first program has set up a lot of bank data material.

You should try deleting any memory banks that are specific to the first program at the end of the first program, i.e. before you chain your second module. If this doesn't do the trick you may need to consider saving some memory bank data on disk, loading it only as required (to minimise overall use of your machine's memory).

It may also be useful to have another look at the sizes of sound samples and so on, that you are using and try to cut down on the amount of memory being consumed for these types of purposes. ***Paul***

Mode promoters



I have a multisync monitor, which I usually use in DBLPAL Hires "no flicker" mode and have been looking for a mode promoter program which will have some effect on AMOS screens because the flickering is driving me mad.

I've tried all the promoters that I can find on the latest Aminet CDPD, but none have any effect on AMOS.

Chris Thompson
Orpington, Kent

I've not seen anything that would be of use, so all I can do is throw this question out to other users to see if anyone else in Amiga Shopper-land can help. ***Paul***

Sequencer One files



How can I use the song files from Sequencer One Plus in Bars & Pipes Professional (Amiga Format Coverdisk 71a) and how do I get a printout of the score?

Derek Kane
Coatbridge, Lanarkshire

The standard approach would firstly involve saving your Sequencer One Plus songs as

▶ 60

Cross-DOS

I would appreciate it if someone would explain to me in plain English how to use Cross-DOS for the following purpose: Is it possible to convert text files to and from an Amiga 1200 and PC? How?

Callum Chau
E-mail

It is for this very type of thing that Cross-DOS was created, Callum. You need to ensure the PC disks are mounted. This is easy to do and is fully explained in your Workbench manual. (If they don't automatically mount on startup, all you should need to do is double-click on the pc0: icon.)

Now, as to converting text. You can simply copy the file on to the disk and read it on a PC (or off the PC disk and read it on the Amiga). The text will need to be in a compatible format though, which means that the word processor you use must be able to read the document type. If you are using Word on the PC, there is a PD program that will convert these docs to Amiga ASCII.

The easiest way to convert, though, is to use plain ASCII. To do this, save the document as ASCII (defined as DOS text on some PC programs). You may still find that some odd characters appear when you open it up on another machine, but there are solutions. A PD program called Multicv is now around that is simple to use and converts text between PC, Mac and Amiga formats so that it appears correctly. You still need to copy the file itself, after conversion, on to a PC disk to be used on the PC (or from a PC disk to use it on the Amiga).

If you want Multicv, you can get it from a PD house (see page 94) or from the Coverdisk of Amiga Format issue 73. Users who are interested in this, but don't have Cross-DOS, which comes with Workbench 2.1 and above, will be pleased to know that a similar program, MultiDOS, can also be found on that same Coverdisk.

David

standard MIDI files using the program's Export option. Having done that it will be possible to use Bars & Pipes 'Muffy' file conversion accessory to convert those files into B&P format. Once loaded into Bars & Pipes, you'll be able to get hard copies of your scores simply by using the program's Print option.

Unfortunately, this is where there may be some bad news. I didn't see the Amiga Format Coverdisk containing Bars & Pipes and although I've been told it was a 'full version' this doesn't necessarily mean that a full range of accessories was provided.

It is quite possible that the Muffy conversion utility was not provided. Worse than that, it is not, to the best of my knowledge, possible to buy this accessory separately since it is now provided as an integral part of the Bars & Pipes version 2.5 package. ***Paul***

Hard disk disaster

Through a combination of bad luck and stupidity I managed to effectively wipe out my A1200 hard drive Amiga system. Wishing to repartition the drive anyway, I reformatted it and set about re-installing my software, but appear to have failed completely. I have copies of all my original disks – can you tell me what must be done to get the machine back to normal?

Ian Richardson
Douglas, Isle of Man

You provided quite a lot of detail concerning the steps you've taken (far too much to print in full) and it looks to me as though you've re-partitioned your drive, but not done a high-level re-format. All partitions used for normal AmigaDOS operations do need to be high-level formatted before they can be used, so reboot with your original system Install disk, select each partition icon in turn and format them just as you would a floppy disk.

Needless to say, the full Workbench installation process will then need to be carried out from scratch. This is not a difficult job, but having selected the Workbench Partition icon, chosen Format from the menu and opted to proceed with the format operation, a potential problem arises.

Once the format operation is complete, you'll no longer have a hard disk resident Workbench! This is not a serious problem, but it can be disconcerting if you re-boot as per normal, i.e. from your hard disk, only to find that the familiar Workbench has vanished, leaving you with a Shell window that can't seem to find its commands and so on.

This happens because since the Workbench is lost, so is the startup-sequence, the user startup, the AmigaDOS commands and all the other bits and pieces that are needed to provide a user with a normal Workbench environment.

The solution is to re-install the Workbench using the original system disks provided with the machine. Boot from the Workbench Install system disk, open the Install drawer and double-click on the English Language icon (or a preferred alternative).

When the Commodore Installer window appears, click on Proceed, then on Install Release 3, choose an installation mode (Novice, Intermediate, or Expert) and then click on Proceed with Install again. If you choose the Novice installation mode, you'll just be asked what languages you want installed and what printer drivers and keymaps are required. The installation will then be carried out more or less automatically.

The various system disks (Workbench, Extras, Fonts, Storage etc.) will be requested as the installation proceeds and the Installer program will copy all the relevant files from these disks and create the required Workbench file arrangements on hard disk.

By that time, you'll hopefully have your system up and running again, so you can set about re-installing all of the third-part software that you had on your drive. ***Paul***

Quantum leap

I have an A2000 with a GVP G-Force 68030 board (fitted with 5Mb of 32-bit RAM) and a Nexus SCSI controller (fitted with 4Mb of 16-bit RAM). There is a SCSI hard drive connected to the Nexus.

I bought the GVP after the Nexus and to obtain the full quota of RAM I have to set the jumpers on the GVP board to tell it there is a SCSI device connected to it. Since the Quantum is connected to the Nexus, not the GVP, am I unwise to use this set-up?

I have a copy of a program which turns off the hard drive after a certain period of inactivity, which seems like an excellent idea when I

Required argument missing

When I try to copy a disk, I get the following message: "Copy failure; required argument missing". Also, if I try to format a disk, I obtain the response: "Unable to open your tool Sys:system/format". To be honest, these little problems get me down, because I read about all these fun things that you can do with an A1200 and I'm left out in the cold...

Kenny Codrineton
Birmingham

Kenny, mate, come in and warm yourself by AS's fire then, and we'll see what we can do.

The problem arises from a little misunderstanding with the Amiga's Shell.

The copy command is for copying files and directories only, not entire disks. To use Copy, the Amiga expects full instructions and if it doesn't find them, it tells you the problem – that an instruction (or argument) is missing. Copy takes the following syntax: copy df0:file df1:file. The first path (df0:) is the source, change it as necessary, and the second (df1:) is the destination, again change if necessary.

It's actually a little more powerful than this. You can type: copy df0:file df1: and the Amiga will assume you want the filename to remain the same, so the result is the same as the previous line. To copy whole directories, type: copy df0:directory df1:directory all. If the directory name doesn't exist on the destination disk, the Amiga will create it.

There are a few more options as well: Quiet, which will stop the Amiga telling you which files are being copied, and BUF=?, which is an advanced option. The BUF stands for buffer. When the Amiga copies a file, it temporarily stores some of the file in RAM: in a buffer. If the file is large, or you have a lot of things in RAM: already, you may wish to limit the size of the buffer. The buffer is sized in 512-byte pieces, so BUF=10, tells copy to limit itself to a buffer of 10x512 bytes, or 5K.

Don't worry if some of that seemed a little advanced, grasp the basics and then use the more complex options when you need them.

The command for copying entire disks is easier to use. It is simply: diskcopy df0: df1: (again the first (df0:) is the source and the second (df1:) as the destination).

The problem with format is a little more worrying. It seems that your format command has been removed from the system drawer on your Workbench (Sys:) disk. Check that this is the case. If it has been removed, then I hope you've been working from a back-up of your Workbench disk as everyone should do. Simply copy it back to where it should be. If it has been removed from the original disk, then you could get hold of a replacement format command from a PD library since there have been some written and placed in the PD.

David

regularly sit for several hours working with my Amiga without accessing the hard drive.

Unfortunately the program is for my A1200 which presumably has control of the power to the IDE drive it uses. Since my SCSI drive is connected directly to the power supply, it cannot be controlled by software. Could I write a switch in the power lines to manually switch off the drive after boot-up, and would the drive come back "online" when power was reapplied?

John Revell
Maldon, Essex

The memory on the GVP card is connected to the processor outside the normal Amiga memory map, so don't think you are limited to 5Mb. If possible, move as much memory from the Nexus to the GVP, which will also speed things up. Setting the GVP to work as though a SCSI drive is present probably only alters some memory locations and if it has worked so far there is no need to change it.

The ability to power down an IDE drive is actually built into the drive mechanics itself, not the Amiga controller. This is because IDE drives, 2.5 inch mechanisms especially, are often used in portable computers where power is at a premium. I really cannot recommend that you switch on and off a drive which is not designed in this way: i.e. more SCSI drives.

As the drive spins up and down it places a great stress on the internal components and, ideally, you should switch the drive on and never switch it off. Most of the noise from the Amiga could be coming from the power supply fan, in which case you could fit a heat-sensitive version which will only power up when absolutely necessary. ***John***

Will my Atari monitor work?



I've got an old Atari SM124 monitor and would like to use it with my Amiga 2000. Is this possible and, if so, how would I have to rewire it? Could it be used as a black-and-white TV if connected to a video player? If so, how could I connect it?

Secondly, are there any multisync monitors available which have an extra video input (like the CVBS input on the 1084 monitors) so I can switch between a video player and the Amiga?

Chee Chong Hin
Cottingham, Humberside

The SM124 is a high-res monochrome monitor with high horizontal and vertical sync frequencies (35.7kHz and 71.25Hz respectively), so I'd guess that it was made to work specifically with Atari computers. Because the frequencies are higher than your Amiga 2000 can produce, then I can tell you there's no way the SM124 monitor will work with it. And neither will a standard PAL video signal, so you can forget the plan to use it as a TV as well. Not that I'm surprised by this, but I suppose you'll be disappointed.

Regarding the second part of your question, I don't know of any popular (i.e. reasonably priced) current multisyncs which also provide composite video input, but you might be able to find a second-hand monitor such as Mitsubishi's EUM-1491 which has RGB and composite video inputs and still works over a wide range of frequencies (horizontal range 15.6-38kHz, vertical range 45-90Hz). If you do find one, I'd guess you should expect to pay around £300 for such a monitor.

However, unless you're planning on adding a RTG graphics card or a scan doubler to your Amiga (or indeed you're planning on upgrading to an AGA machine or A3000), I fail to see why you can't use either a Commodore 1084 or Phillips 8833MkII monitor to provide you with both Amiga and switchable video displays, since your current Amiga can't take advantage of the higher frequencies and screen resolutions provided by a multisync monitor anyway. ***Gary***

Upgrade queries



First let me say that although it is early days at the moment concerning the new style of Amiga Shopper, I find it to be very easy and enjoyable to read. Since I took out a subscription to Shopper I have stopped getting the other three magazines that I used to purchase. Keep it up!

Now to the query. When Commodore/Amiga finally sort out this fiasco, I would like to upgrade to an A1200 (or whatever equivalent they bring out). My questions are:

1. Will the hard drive that I have in my A600 fit the A1200? I seem to remember that the connecting cable is different.

2. Will my sound sampler and scanner work OK with the A1200? Or will I have to upgrade the software?

3. I am 99 per cent certain that the monitor, printer and data switch box will work and I know that the memory upgrade will not work. But will the Roclite disk drive I have work?

4. I have a program called Shortcut Extra installed in the Startup drawer of my hard disk. I use this because I find it very useful and time saving. My problem is that it will not run some software. The same software will not run from the CLI using the Run or Execute command, even when supplying it with a full path.

Mr J. M. Smith
Thamesmead, London

As you are no doubt aware by now, the fiasco is over. Let's hope it's not too long before A1200s start to reappear in the shops.

1. The A1200 and A600 are both designed to be fitted with internal 2.5 inch IDE hard drives. Both use identical cables, so it should be simply a matter of opening both machines and performing a quick transplant.

2. As both the A600 and A1200 have post-1.3 versions of Workbench, there should be no problems: unless the software has been particularly badly written and fails on the faster 68020 chip present in the A1200. This is unlikely.

3. The monitor, printer and switch box will be fine, although a better monitor will display more screen modes on the A1200. You are correct in thinking the memory expansion will

not work (only PCMCIA cards work on both machines as the trapdoor expansion slots differ wildly). Any reasonably new floppy drives work perfectly with the A1200; after all, the A1200 has been the standard Amiga for some time. Check the drive revision number with Silica, ☎ 0181 309 1111, if you are still not sure.

4. First of all, try running the software using the following CLI command:

```
run [name of program] >nil: <nil:
```

If this doesn't work, it sounds as though the stack value has been set high enough. Each program has a stack of memory from which it can allocate storage space. Look in the Info file of a program icon to see the size (select the icon and use Info from the Workbench menu). The CLI/Shell has a default size (enter "stack" into a Shell by itself to see it), which may not be large enough.

If Shortcut Extra doesn't allow the Stack size to be set, create a small file like this:

```
stack 8000 (check the program's info for
the right size)
run [name of program] >nil: <nil:
```

Now set up Shortcut to execute this file. ***John***

Large screens

Coding

Is there any extension I can add to AMOS to open screens larger than 1,023x1,023 pixels. If not, are there any high-level languages that would allow me to open larger screens?

I've written a program to convert screens from PCW to IFF format and many screens are much larger than 1,023 pixels wide. Is there any indication that CD-ROMs for the Amiga will become as cheap as PC CD-ROMs in the future? Why are they so expensive?

Joe
Strabane, Co Tyrone

To the best of my knowledge you are out of luck as far as AMOS goes. Although the newer Amigas can handle screen-widths of 1,280 pixels, you really need to start thinking about adding a hires graphics card to your machine.

PC hardware, such as CD-ROM drives, soundcards and so on, are driven by a PC marketplace in which a low-profit-margin/high-sales-volume philosophy is the order of the day. It works simply because there are so many PC users out there!

Equivalent Amiga hardware is slowly coming down in price, and it will continue to become more affordable as more Amiga users jump on the bandwagon. PC prices, however, will always lead the way. ***Paul***

Workbench pictures

Beginners

Whenever I look at the pictures of Workbench in your magazine you have wonderful backdrops. How do you get pictures as backdrops? I have Imagine 2 and would like to use some rendered images as backdrops, so could you please explain how to do this?

Nick Leatherland
Alfreton

This is a very easy one, so don't worry. You need to open up the Preferences drawer on the Workbench and double-click on the WBPattern icon. This opens the preferences for the backdrops. There are two gadgets, Placement and Type. Placement should read Workbench and Type must read Picture (Pattern lets you put one of the patterns shown there as a backdrop).

When Picture is chosen, the Select Picture option should become un-ghosted. Click on this and select the path and file name of the picture you want as a backdrop. The picture must be an IFF file (like DPaint produces). It also needs to be in the same resolution as the Workbench or you may end up with a stretched image or only part of it being shown. When you have selected the picture, click on either Use or Save.

One thing to note is that you may need to edit the Screenmode preferences, also in the Prefs drawer. If the picture is colourful, you'll need to set the number of colours on Workbench to 256. Note that you cannot use images with more than 256 colours and also that dithered images sometimes produce odd results.

As far as using an image from Imagine is concerned, follow the guidelines above. The image must be an IFF with a maximum of 256 colours, so you might need to use a conversion program. If you don't have one, ImageStudio 2 will be ideal and is cheap to register, or check out the image translation program, Transition, on the front of Amiga Format Issue 73.

David



Workbench with 256-colour IFF backdrop (left), set up using the prefs (below).

Airlink and V-Lab Y/C troubles

Software

I have a problem with my V-Lab Y/C framegrabber card and the AirLink add-on which is supposed to help me automate the grabbing process from my VCR. I have written to the supplier, Amiga Centre Scotland, and telephoned them on several occasions, but have still to receive any help towards getting my AirLink working. Sometimes when I have called I've been told that the relevant person was not in the office and sometimes the phone hasn't been answered at all.

The trouble is that I have been totally unsuccessful in my attempts to link V-Lab and AirLink (an infrared remote control system). Following the AirLink manual, I've managed to 'read' the infrared controller of my Sony EV-C45E video recorder and operate it via AirLink by clicking on the gadgets of the Air window, but I have no idea how to create link commands which will control V-Lab via ARexx, which is what it seems I must do.

Part of my problem is that I have never used ARexx before and cannot understand how the V-Lab card addresses AirLink. Looking at the supplied V-Lab macros is little help either, since they are in German! Can you help at all?

Anthony McAtear
Dumbarton, Scotland

One question which immediately springs to mind is whether you actually have ARexx running, because if it isn't, then the V-Lab ARexx macros certainly won't work.

You have to run the RexxMast program to initiate ARexx and the easiest way is to drag its icon into the WBStartUp drawer in your Workbench so that it initialises ARexx every time you boot your Amiga. Alternatively you can add a line such as "DH0:RexxMast" to your S:User-Startup file.

Beyond that I really can't give you any helpful answers, not having had any experience with the AirLink. I tried calling Amiga Centre Scotland every half an hour over two weekday mornings, but (except when the phone was engaged) all I could get were recorded messages telling me that no-one was available.

So, like you, I couldn't get any reply from ACS themselves to help solve your problems. In the end it may be that you'll have to communicate directly with MacroSystem in Germany to get your AirLink up and running successfully, but it certainly shouldn't have to be that way. ***Gary***

Faster graphics control

Buying

I recently won a copy of the excellent Photogenics program, thanks to your competition in AS46. Having used it to edit and touch-up some digitised photos of the family I have come to the conclusion that I need a more sensitive and accurate method of input for my A1200, therefore I need some help.

1. The Tabby graphics tablet has been reported as slowing down the computer. Allied to the slowness of 24-bit painting would this make it unusable?

2. How good are light pens? I've seen one advertised for £16.99 in Amiga Format. I appreciate that you get what you pay for. Are

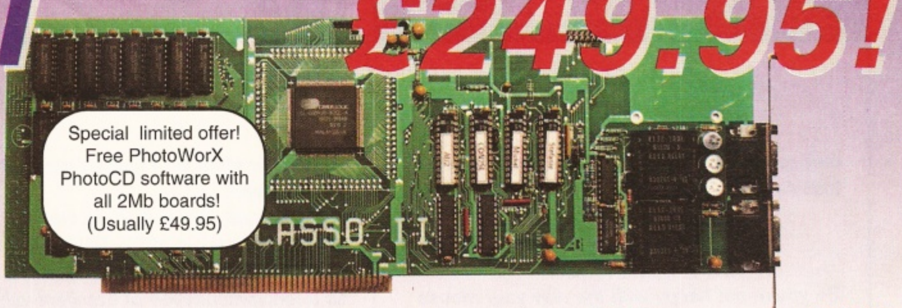
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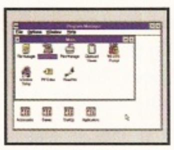


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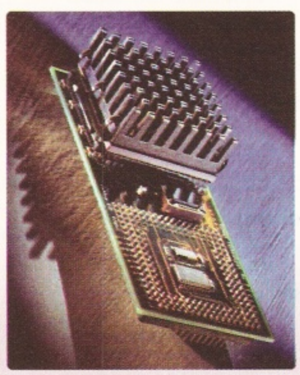
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The Doubler 4000 accelerator is an easy-to-install daughter board that simply *replaces the 25 MHz 68040 CPU with a faster 50MHz version already installed*. Anyone who can install a SIMM can install the Doubler 4000. Customers are supplied with photo-illustrated installation instructions plus the necessary extraction tool to perform the installation.

Simply putting a faster processor into an Amiga does not help much unless the system can supply enough data to keep it busy. That is why the Motorola 68040 contains a large on-chip cache. This cache frees the Doubler 4000 to work semi-independently of the Amiga memory subsystem. In fact, 85% of the time the cache contains the data and instructions necessary for the Doubler 4000 to operate at full speed.

The Doubler 4000 includes an on-chip math co-processor, and will dramatically speed up any application - such as rendering - that depends on calculations. It is completely reliable and system safe. An integral cooling system ensures that the Doubler 4000 runs cooler and more reliably at 50 MHz than the original processor.

RELATIVE PERFORMANCE (SysInfo V3.15 benchmarks.)

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CPU MIPS	-	A4000/40	: 18.76	DOUBLER 4000 :	37.72
DISK MBYTES/SEC	-	A4000/40	: 1.40	DOUBLER 4000 :	1.58

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they accurate? Will they damage the monitor (mine's a Microvitec 1438).

Trevor Sorrell
Donnington, Lincs

So you're not happy with the way your mouse and your graphic programs interact? I can sympathise with your troubles because I used to hate using a mouse for graphics, thinking that it was getting in the way of my work, slowing me down, was awkward to use and so on. But after sticking with it for a few more months, I realised that it probably wasn't the mouse which was the problem, it was me 'thinking' it was a problem!

Changing from pens, pencils and paint brushes to an electronic rodent certainly isn't the easiest transition to make, but if you persist you might discover (as I did) that the mouse isn't necessarily the problem, unless it needs cleaning of course. In the past I've used a few cheap graphics tablets and I can't tell you how relieved I was to get back to using a mouse! Since then I haven't looked back and I'm on my fifth mouse in eight years.

There could be other reasons for your anti-rodent stance; firstly, almost all 24-bit paint programs struggle to keep up with the input device unless the host Amiga is blindingly fast, so faithful freehand drawing really isn't a realistic expectation unless your Amiga is very powerful – which, by comparison, your '020 A1200 definitely isn't. Secondly, even with 6Mb of total memory, your Amiga could be working on the edge of its resources, slowing down your input as it juggles memory to get the job done.

That said, I've looked up Graeme Sandiford's review of the Tabby (AS40) and he gave it 94 per cent at the time, so I'd take that as a recommendation of excellent value for money. Of course the Tabby doesn't have all the features of a professional tablet, such as pressure-sensitive operation, like those produced by Wacom and other companies, but it does cost less than £60.

If you seriously can't stand your mouse any longer, it looks like the Tabby would be a worthwhile alternative which won't break the bank. Graeme didn't mention any slowdowns caused by the Tabby, but as I said earlier, a lot will depend upon the speed and capabilities of the Amiga it is used with and, indeed, what kind of work it is required to perform.

As for light pens, if they were really any good we'd all be using them, wouldn't we? Especially at only £16.99 each. Whenever I've used light pens (and I must say this was years ago) I've found them to be a pain in the wrist and not especially friendly or accurate to use. Best just to forget them altogether, since you asked for my opinion. ***Gary***

Read up on DTV



My wife bought me an Amiga 1500 early in 1992, largely because of my interest in video, but I'd hardly had a chance to unpack it when I was sent to work.

Now that I've started to get to grips with what is probably a very out-of-date piece of hardware I would nevertheless like to persevere with it.

Can you suggest any books which would guide me into desktop video please? Additionally, what about the Amiga Format videos which appear to be available as two tapes at £14.99 each or one at £19.99.

Robert Kewell
East Sheen, London

I'm surprised you've not seen the ads for my own book "Amiga Desktop Video" in either Amiga Shopper or Amiga Format. It's published by Future Publishing (ISBN 1-898275-08-4) and you can either order it from your favourite bookstore (if you can't find it on the shelves) or get it direct from Future Book Orders, Future Publishing Ltd, FREEPOST (BS4900), Somerton, Somerset TA11 6BR, or by calling ☎ 01225 822511. The good news is that the price has recently been reduced to £9.95 and even if I say so myself, you should find it a good read.

By the way, I'm sure that some readers will think this letter is a shameless plug concocted to sell a few more copies of my books, but I can assure you that this is a genuine reader's letter. (The fiver will be on it's way to you soon, Bob – just kidding).

I can't tell you anything about the AF tapes at all, since I've never seen them. Try asking Amiga Format about them is the best I can suggest. ***Gary*** ■

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☐ **A4000**

Approximate age of machine: ______________________

Kickstart version (displayed at the "insert Workbench" prompt)

☐ **1.2** ☐ **1.3** ☐ **2.x** ☐ **3.x**

Workbench revision (written on the Workbench disk)

☐ **1.2** ☐ **1.3** ☐ **1.3.2** ☐ **2.04/2.05**
☐ **2.1** ☐ **3.0**

PCB revision (if known). Do not take your machine apart just to look for this! ______________________

Total memory fitted (see AVAIL in Shell for Workbench 1.3) ________

Chip memory available (see AVAIL in Shell) ______________

Agnus chip (if known) ______________________

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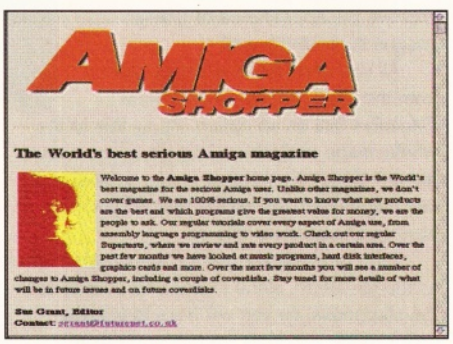
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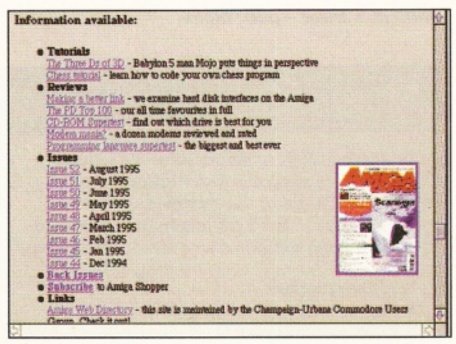
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Part 6

Photogenics

This month ***Graeme Sandiford*** *re-touches a model's lips and eliminates a skier before our very eyes, all thanks to a bit of cloning.*



This unsuspecting fellow is about to become another victim of Photogenics' cloner.



Dog: Woof woof (translation – blimey!) Gone without a trace – poor bloke.

More tutorials

This is the sixth of seven tutorials where we'll be covering most of Photogenics' features. Some of the techniques that we will discuss in the tutorials listed below are equally applicable to other similar packages.

1. Alpha channels
2. Text effects
3. Filter effects (part 1)
4. Filter effects (part 2)
5. Image composition
6. Image re-touching
7. Drawing techniques

Hello and welcome for the final time, this will be my last Photogenics tutorial. However I'll be leaving the final instalment, on painting techniques, in very capable hands indeed – Photogenics' creator, Paul Nolan!

Anyway, back to this month – we'll be venturing into one of the most powerful and, sometimes, fun areas of image processing – image re-touching. So what exactly is image re-touching? In essence, it's the manipulation of pictures, especially scanned ones, of the real world. This can include improving the quality of an image and adding or removing detail.

As it's my last month let's be ambitious and try to do all three – improving the quality of a scanned image, adding detail and removing detail. To do this we're going to use two paint modes and the cloner tool. If you've not used the cloner tool before I wouldn't be surprised, since it's one of Photogenics' best kept secrets.

In fact, it's hidden as one of the paint modes. It works by copying one area of the screen to another as you draw, enabling you to borrow from existing detail to add more, or to blend elements you don't want into the background.

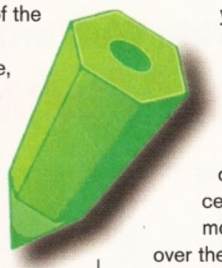
One of the most annoying things about scanned images is that you can sometimes get loss in image-quality, usually as a result of the print dot patterns creating a moire effect. This can give you a grainy, or, even worse, a heavily-patterned image. However, help is at hand, in the shape of the Gaussian blur. This most useful of blurs can improve the appearance of grainy images surprisingly well.

All you need to do is select blur from the paint modes list and Small Gaussian 3x3 as an option. Apply this to the whole image and after a little while you should get a noticeably smoother image. However, if the image has become too blurred you may want to sharpen it a little bit.

Unfortunately, version 1.0's sharpen mode is a little too harsh, since there is no control over the sharpness, so you will have to use the matrix mode and load the low or medium sharpen matrix.

Now it's time to whip out the cloner tool to add, or, to be more exact, borrow more detail. The picture I have used is a face, but you can use just about any image. In this example I will replace this poor young lady's mouth with a third eye – impractical maybe and certainly a little gruesome.

> "If you've not used the **cloner** tool before I wouldn't be surprised, since it's one of Photogenics' best kept secrets."

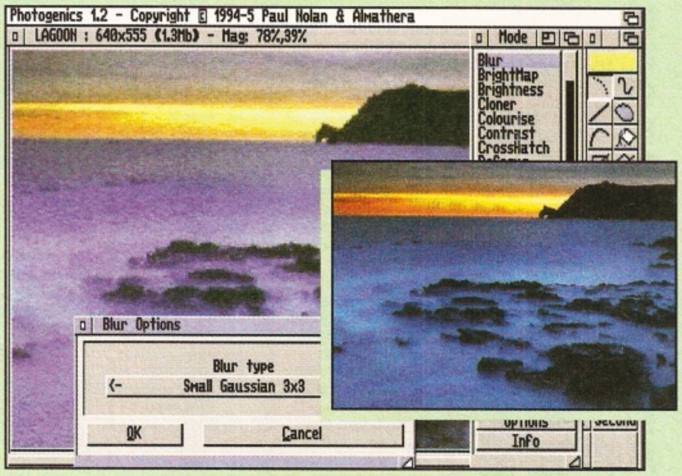


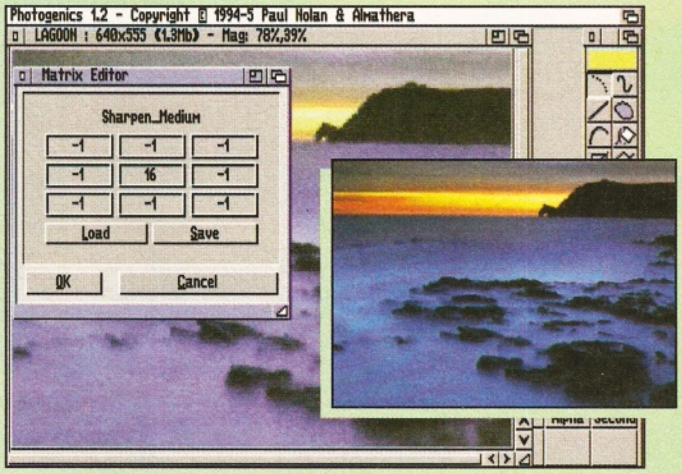
All you need to do is select the cloner mode and then select this mode's options. Once you've pressed the option button, the next time you click on-screen you can set the distance relative direction of the area to be cloned by dragging a line.

For the first example drag a line from approximately the centre of an eye to the centre of the mouth. Then start painting as usual over the mouth. As if by magic an eye will begin to appear. A handy tip is to start off with a largish brush for the centre of the eye and then use a smaller one to blend it into the surrounding area – remember painting with the right-hand mouse button will "remove paint".

We'll use the same technique for our second example; however, we want to use a shorter line because, when removing detail, we need to clone an area closer to where we are painting. That's about it, but for examples of what can be done with this tool have a look at the pictures on the next page. ■

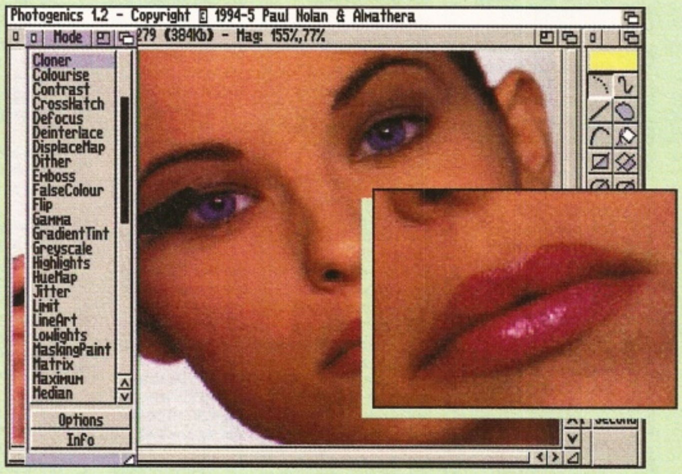
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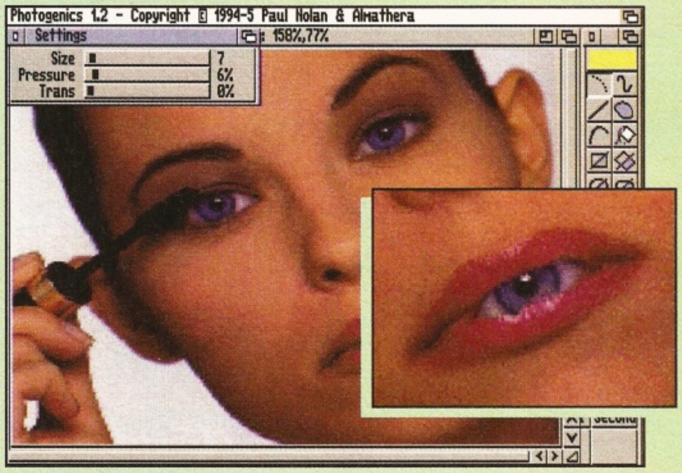




1 *Quite often scanned images can be lacking in quality due to a poor or small original picture. We'll be improving this image's quality by applying a Gaussian blur, from the blur paint mode.*

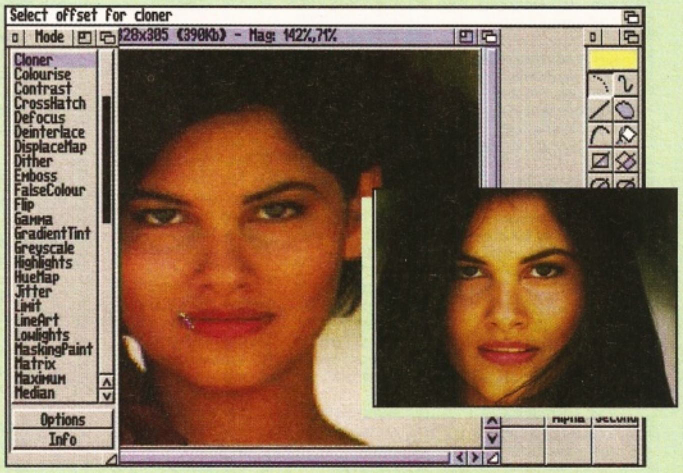
2 *If the image is too blurred it can be sharpened up. We're not going to use the sharpen mode as it's a little too harsh. Instead select the matrix mode and load Sharpen_medium matrix.*

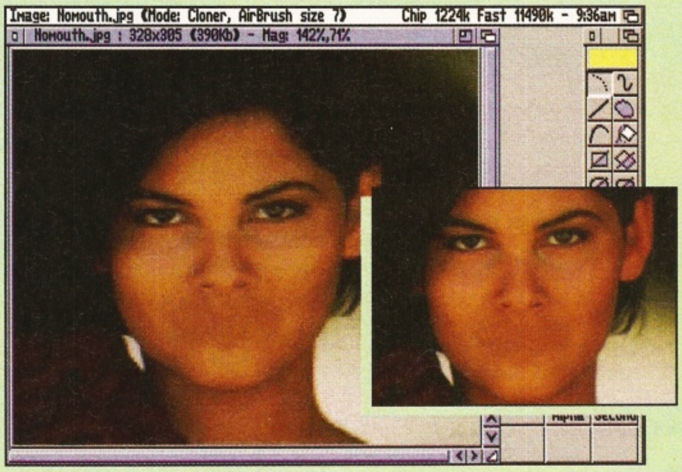




3 *This poor lass is about to given an extra eye. Select the cloner paint mode and select the mode's option. Then drag a line from the area you want to clone to the area you'll be painting in.*

4 *It helps to start with a large brush with no transparency and then switch to a smaller brush with a little more transparency to tidy up and blend in the image.*





5 *Next we are going to try our hand at removing details – this woman's mouth to be exact. We'll be applying the cloner paint mode to the lips by cloning the surrounding area.*

6 *That'll teach her to criticise my writing style, hah! When using the options for this image select an area close to the mouth and clone by drawing a short line.*

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Assembler

The final instalment

The Amiga, in summary, is a bunch of electronic components soldered to a cute little green board. **Toby Simpson** *finishes off his Assembler series with a bit of metal-bashing.*

OK, so I lied about the sound effects on the Coverdisk. But that's the way things go. We've opted instead for something a tad more useful, since five pages isn't much space to explain the entire Amiga hardware register layout! Last month we looked at some of the basics, introducing a little of what the Amiga's graphics hardware has to offer and a whole bunch about interrupts. Having laid the ground-work for this last staggering installment of the Assembler course we're going to write some stuff.

First, a little memory jogging together with a bit more background information.

The Amiga, in summary, is a bunch of electronic components soldered to a cute little green board. Some of these components have an astonishing array of little legs. The bloke in charge is the microprocessor. In the case of the Amiga, this is a Motorola 68000 series chip. The microprocessor, or CPU (Central Processing Unit) by itself is pretty useless. In order to work, it needs somewhere to store and recall information. This, of course, is your memory.



There are two basic sorts of memory inside the Amiga – RAM and ROM. RAM stands for Random Access Memory, and you can read from it and write to it. When you switch off your computer, its contents are lost. In most computers these days, there is a small portion of battery-backed RAM to store time, date and configuration information.

Your ROM is read-only. Its contents are fixed at manufacture, and this contains the program which the computer will start running when it is powered on. The Amiga's ROM (Kickstart) contains a full multi-tasking Operating System. Also attached to the CPU are a bunch of peripheral chips, such as those which drive the disk drive, or screen display.

Some of these talk to RAM directly without CPU intervention. This is called DMA (Direct Memory Access). The display hardware uses it to read information from RAM to generate the screen display. Even on a low-resolution display, this can be upwards of 16 Megabytes a second.

The Amiga's custom video hardware is only able to talk to your Chip RAM. This is the area of RAM at the bottom. Most Amigas have 1Mb of Chip RAM and 1 or more Mb of Fast RAM. Fast RAM cannot be accessed by the video hardware components, such as the Blitter, or Copper. Amigas can have a maximum of 2Mb of Chip RAM, so it is important to conserve it, storing only stuff which NEEDS to be there.

Other devices are able to freeze what the processor is doing, and make it do something else for a while. This is an interrupt. The 68000 has seven levels of priority. Interrupts of a higher priority can jump in over those with a lower priority. Interrupts happen for a variety of reasons, ranging from a vertical blanking interrupt which occurs every time a single display frame is shown (25 times a second on a domestic TV), to one which happens when an audio sample has finished playing.

To control these custom chips we can access their registers. These registers act just like normal memory in that we can use instructions like "move" to read from them, or

The Blitter

Summary: The Blitter moves blocks of memory from one place to another. For the purpose of this article, we are using it to manipulate screen information.

It can be set up to perform other useful tasks. You set up a source, a destination and a size and the Blitter copies the chunk of memory in question. Being clever, it can have up to three sources (A, B and C). One of 256 logical operations can be performed on A, B and C to decide which of them actually gets copied to the destination, D.

The Blitter can only draw rectangles, it cannot draw strange shapes, which is bad if you wish to use the Blitter to add an odd-shaped graphic to the screen. But the multiple sources allow you to work around this, by creating a mask of the graphic and using that to decide which pixels are actually drawn. In advanced use, the Blitter can draw lines and perform basic fill operations.

Usage: The Blitter is complex, and is one of the easiest causes of heartache for beginner programmers. Your best bet is to read the section detailing it in the hardware reference guide.

Before you access any of the Blitter registers, remember to call the graphics.library "OwnBlitter()", this is done like this:

```
    GRA   OwnBlitter          ; Take over
blitter
    GRA   WaitBlit ; Ensure previous
operation is complete

; ... access the blitter now ...
    GRA   DisownBlitter       ; Ok, we're
done.
```

Note that after owning the Blitter, we call WaitBlit() to ensure that everything is clear before we fiddle. There is not space to go through all the complexities of the Blitter here, or even do more than scratch the surface, but here is a working example.

You can add this right after your Copper bar WAIT "bne.s" instruction:

```
        GRA      OwnBlitter
        GRA      WaitBlit
        move.l   #$ffffffff,bltafwm(a5)
; All edges too.
        lea      Bitplane,a0
        move.l   a0,bltdpt(a5)
; Destination.
        move.w   #$0000,bltdmod(a5)
        move.w   #$0100,bltcon0(a5)
        move.w   #$0000,bltcon1(a5) ;
Simple clear.
        move.w   #$3214,bltsize(a5) ;
320 x 200 block
        GRA      DisownBlitter

        moveq    #100,d1
        DOS      Delay
```

This clears the top 200 lines of the display, and waits two seconds before the program quits so that you can see the results of the procedure. The Blitter is very handy for operations like this, because it is so simple to set up.

The moment we write to "bltsize", then the Blitter operation begins immediately, so we must set up everything BEFORE bltsize.

Warning: The Blitter is dangerous. If you get it wrong you can crash your computer very quickly indeed:

- ***Always* use OwnBlitter() and DisownBlitter() to stop accidental Operating System use whilst you are using it.**
- **Always use the graphics.library WaitBlit() rather than making your own code. WaitBlit() is fast (five instructions), has no overhead, and is totally reliable. It takes into account bugs in earlier Blitters for you.**
- **Make sure it is set up correctly. Write your code neatly. Ensure using WaitBlit() that the previous Blitter operation has finished before you start another!**

write to them. Some have restrictions over what you can do (like being read-only, for example).

Summary sorted. Let's make a start. This month we're going to look at actually using the hardware to perform tasks, and get you set up to write some cool stuff yourself. We'll look at the Copper chip, the Blitter, and the bit-plane hardware; a separate box-out for each. In the meanwhile, we'll discuss how to get everything set up correctly.

Hitting the hardware nicely

There is no such thing, to be honest. In an ideal world we wouldn't need to access the hardware directly, because it messes up compatibility and makes programming more complex. But, since it is fun, and the Amiga Operating System is totally unsuitable for certain tasks, we do find ourselves forced to. The trick is to do this as legally as possible because this prevents all sorts of problems (see last month for a long lecture on the subject).

To save hassle, and make things as easy as possible for you to play around immediately with the hardware, the startup code listing contains a general set of routines which "take over" the hardware, and install a Copper list and Vertical Blanking interrupt (VBR). The VBR is set up to trigger once every frame, 50 times a second. It opens the two libraries which are required, "intuition.library" and "graphics.library".

When you exit the program, your Workbench screen will be restored, libraries will be closed, and the interrupt will be removed. The source is well commented, so should make sense, but a couple of things are worth expanding on. Before we start playing with the hardware registers, we first tell the OS to get out of the way:



```
;
; ---- Kill intuition display ....
         suba.l      a1,a1
         GRA         LoadView
         GRA         WaitTOF
         GRA         WaitTOF
; Remove system copper, wait for it to go
```

Note that we use "suba.l" to clear the A1 register. We've introduced this before. It is quicker than a "move.l #0,a0". The next call loads a blank display to the Amiga. This will eliminate all your screens. The Operating System's Copper list is no longer active.

We then call WaitTOF() twice. WaitTOF stands for "Wait for Top Of Frame". This has the effect of delaying for 2/50ths of a second for a PAL screen. This is long enough for the LoadView() to properly take effect, and avoids a display problem with you arguing with the OS over who should be controlling the display.

Our next weird bit is this...

```
         move.l      GraBase,a0
         move.b      gb_ChipRevBits0(a0),d0
```

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What? No AGA hardware reference manual?

This is the frequently asked question of the gods. We get a lot of letters from people here at Castle Shopper asking where the hardware reference manual talking about AGA is. Well, there isn't one. Commodore, for compatibility reasons, chose not to release this information.

Although by a freak accident they did still release the register names and locations in the include file "hardware/custom.i". Numerous AGA register reference documents are available for FTP.

Your best bet is to get hold of the hardware reference manual Edition 3 (See Other Hardware boxout) and together with what I've explained this month, make an educated guess. You'd be surprised!

The startup code – stamp your authority and take over your hardware

Type this in exactly. It has been tested on DevPac 3. This code gives you a safe base to experiment with the hardware, and try out the Copper, Bitplane hardware and Blitter.

```
;
========================================
==================================
;
; Amiga Shopper Assembly Course: Main
Startup Code
;
; Tested using DevPac.
; By Toby Simpson
;
         section   main_code,code

ENTRY_POINT:       bra       BEGIN
;
         dc.b      0,"$VER: hardware.asm
1.00 (22.6.95)",0
;
; ---- Include files ....
         incdir    "inc:"
         include   "exec/funcdef.i"
; You may not need this
         include   "exec/exec_lib.i"
         include   "exec/exec.i"
         include   "exec/execbase.i"
         include   "exec/interrupts.i"
         include   "dos/dos.i"
         include   "dos/dos_lib.i"
         include   "dos/dosextens.i"
         include   "libraries/cia_lib.i"
         include   "hardware/custom.i"
         include   "hardware/intbits.i"
         include   "hardware/dmabits.i"
         include   "hardware/cia.i"
         include   "intuition/intuition.i"
         include
"intuition/intuition_lib.i"
         include   "graphics/gfx.i"
         include   "graphics/gfxbase.i"
         include   "graphics/view.i"
         include
"graphics/graphics_lib.i"
;
; ---- Main equates ....
_EXECBASE:          equ       $04
   ; exec.library base
_CUSTOM:  equ       $dff000
; Base of custom chip registers
OS_REQUIRED:        equ       34
   ; Minimum OS version

color00:  equ       color
color01:  equ       color+2
bpl0pth:  equ       $e0
bpl0ptl:  equ       $e2              ;
Some registers not defined in
hardware/custom.i
;
; ---- Macro Definitions ....
SYS:                macro
         move.l    _EXECBASE,a6
         jsr       _LVO\1(a6)
; exec.library access macro
         endm

DOS:                macro
         move.l    DosBase,a6
         jsr       _LVO\1(a6)
; dos.library access macro
         endm

INT:                macro
         move.l    IntBase,a6
         jsr       _LVO\1(a6)
; intuition.library access macro
         endm

GRA:                macro
         move.l    GraBase,a6
         jsr       _LVO\1(a6)
; graphics.library access macro
         endm
;
;
;
========================================
==================================
; ---- Main Startup Code ---------------
-----------------------------------
;
BEGIN:              lea
DosName(pc),a1
         moveq     #OS_REQUIRED,d0
         SYS       OpenLibrary
         move.l    d0,DosBase
         bne.s     BG_GotDos         ; We
got the DOS Library
         moveq     #100,d0
         rts
; Catastrophic Failure.
;
; ---- Fetch Task ID for startup code
....
BG_GotDos:          suba.l    a1,a1
         SYS       FindTask
         move.l    d0,sys_TaskNum
; Our task ID.
         move.l    d0,a0
         move.l    #-1,pr_WindowPtr(a0)
; Disable DOS requesters
;
; ---- Open libraries ....
         lea       IntName(pc),a1
         moveq     #OS_REQUIRED,d0
         SYS       OpenLibrary
         move.l    d0,IntBase
         beq       BG_CloseLibs
; No Intuition!
         lea       GraName(pc),a1
         moveq     #OS_REQUIRED,d0
         SYS       OpenLibrary
         move.l    d0,GraBase
         beq       BG_CloseLibs
; No Graphics!
;
; ---- Check if AGA chipset is present
....
         move.l    GraBase,a0
         move.b    gb_ChipRevBits0(a0),d0
         and.b
#GFXF_AA_ALICE+GFXF_AA_LISA,d0
         cmp.b
#GFXF_AA_ALICE+GFXF_AA_LISA,d0
         bne.s     BG_No_AGA         ; No
AGA Chipset.
         st.b      aga_present
```

DMACON register reference

DMACON Reference. If you wish to set bits, then bit 15 (SET/CLR) must be set to 1. Then, every time a 1 appears in a corresponding bit, that bit is set.

If you wish to clear bits, bit 15 must be zero, then every time a 1 appears in any other bit, that bit is cleared. Bits written with a 0 are not changed.

```
    BIT:
    15      SET/CLR     Set/Clear control bit
    14      BBUSY       Blitter Busy status
flag (Read Only)
    13      BZERO       Of no general use
    12      - unused -
    11      - unused -
    10      BLTPRI      Blitter takes
priority over CPU with DMA requests
    9       DMAEN       Enable all DMA below
here
    8       BPLEN       Enable bitplane DMA
    7       COPEN       Enable copper DMA
    6       BLTEN       Enable blitter DMA
    5       SPREN       Enable sprite DMA
    4       DSKEN       Enable disk DMA
    3       AUD3EN      Enable audio channel
3 DMA
    2       AUD2EN      Enable audio channel
2 DMA
    1       AUD1EN      Enable audio channel
1 DMA
    0       AUD0EN      Enable audio channel
0 DMA
```

```
        and.b
#GFXF_AA_ALICE+GFXF_AA_LISA,d0
        cmp.b
#GFXF_AA_ALICE+GFXF_AA_LISA,d0
        bne.s       BG_No_AGA           ; No
AGA Chipset.
        st.b        aga_present
```

...which detects whether the AGA hardware is present and sets a flag if so. It allows you to check, should you want to, before doing certain things. Although the AGA hardware information has not been released, most of it is guessable (and we're going to give you some hints!).

The rest of the code is pretty much off the shelf 68000. We open some libraries, and perform a few other basic setup functions. You add any code you wish to write at the MainEntry: label. If you want to add some interrupt code, you can add it where shown in the listing at the VerticalBlank: label.

Your Copper list is held at the CopperList: label. As typed in, the listing will install a blank screen Copper list and fade the screen through some ghastly blues for just over two seconds, to give you an example. When your program is done, the code re-installs the OS's Copper list.

Conclusion

If you've had any success this month, then you've generated displays, done some Copper lists and even used the Blitter to draw an object. Where to go from here? See the Other Hardware boxout for information on buying the Hardware Reference Manual. There is no AGA hardware reference manual, unfortunately.

The Amiga's video hardware is a complex beast, and it would take several issues of Amiga Shopper to do it justice. It is hoped that this is enough to get you started in the right direction. If there are still holes in your knowledge after this which you would like to see more on, write to me at the normal Amiga Shopper address and maybe we'll do an assembling special!

Unfortunately, our listing was not able to make it on to this month's Coverdisk, but will be on next month's. But, look on the bright side, you'll get plenty of typing practice! In the meanwhile, happy coding. ■

The startup code cont....

```
;
; ---- Install VBR interrupt ....
BG_No_AGA:          lea
interrupt_VERTB(pc),a1
            lea         Int_VERTB_Name(pc),a0
            move.l      a0,LN_NAME(a1)
; Set server name.
            move.b
#NT_INTERRUPT,LN_TYPE(a1)     ; Set type.
            move.b      #127,LN_PRI(a1)
; Set priority.
            lea         VerticalBlank,a0
            move.l      a0,IS_CODE(a1)
; Set address.
            moveq       #INTB_VERTB,d0
            SYS         AddIntServer
; Add the interrupt server.
;
            bset        #$01,$bfe001
; Disable audio filter
;
; ---- Kill intuition display ....
            suba.l      a1,a1
            GRA         LoadView
            GRA         WaitTOF
            GRA         WaitTOF
; Remove system copper and wait for it
to go
;
; ---- Install Copper-List and Run
program ....
            lea         _CUSTOM,a5
; Base of custom chips
            lea         CopperList,a0
            move.l      a0,cop1lc(a5)
; Set copper program address
            move.w      #$00,copjmp1(a5)    ;
Kick-start copper list
;
            jsr         MainEntry
            bclr        #$01,$bfe001
; Reset filter
;
; ---- Re-install system display /
copper list ....
            INT         RethinkDisplay
            move.l      GraBase,a0
            lea         _CUSTOM,a5
            move.l      38(a0),cop1lc(a5)
            move.w      #$00,copjmp1(a5)    ;
Boot-Start copper.
            move.w      #$8020,dmacon(a5)   ;
Sprite DMA _must_ be on.
;
; ---- Re-Install DOS requesters ....
            move.l      sys_TaskNum,a0
            clr.l       pr_WindowPtr(a0)
;
; ---- Free VBR interrupt ....
            lea         interrupt_VERTB(pc),a1
            moveq       #INTB_VERTB,d0
            SYS         RemIntServer
; Remove VERTB server
;
; ---- Close libraries ....
BG_CloseLibs:       tst.l       GraBase
            beq.s       BG_SkipLib1
            move.l      GraBase,a1
            SYS         CloseLibrary
; Close up GRA.
BG_SkipLib1:        tst.l       IntBase
            beq.s       BG_SkipLib2
            move.l      IntBase,a1
            SYS         CloseLibrary
; Close up INT.
BG_SkipLib2:        tst.l       DosBase
            beq.s       BG_SkipLib3
            move.l      DosBase,a1
            SYS         CloseLibrary
; Close up DOS.
BG_SkipLib3:        moveq       #$00,d0
            rts
;
; ---- Startup code variables ....
DosName:    dc.b        "dos.library",0
IntName:    dc.b        "intuition.library",0
GraName:    dc.b        "graphics.library",0
DosBase:    dc.l        0
IntBase:    dc.l        0
GraBase:    dc.l        0
; Library bases
sys_TaskNum:        dc.l        0
    ; Pointer to task ID.
aga_present:        dc.b        0
    ; aga chipset present flag
;
interrupt_VERTB:dcb.b       IS_SIZE,0
Int_VERTB_Name:     dc.b
"AMShopper_VBR",0   ; Interrupt
information
;
;
=========================================
==================================
; ---- Our Code -------------------------
-----------------------------------
;
MainEntry:          moveq       #127,d1
            DOS         Delay
            rts
;
;
=========================================
==================================
; ---- Our Vertical Blanking Interrupt -
-------------------------------------
;
VerticalBlank:      movem.l     d2-d7/a2-a6,-
(sp)

; ... your code here ...
            move.w      counter,$dff180
            add.w       #$01,counter

            movem.l     (sp)+,d2-d7/a2-a6
            moveq       #$00,d0
; Important!
            rts
; Correctly not the RTE instruction
;
counter: dc.w       0
;
;
=========================================
==================================
; ---- Our Copper List ------------------
-----------------------------------
;
            section     CopperList,data_c   ;
MUST go in chip-ram!
CopperList:         dc.w        $0100,$0000
            dc.w        $ffff,$fffe
; Blank screen
;
            END//
```

Bitplane hardware

Summary: The Bitplane hardware allows you to set up displays. With the AGA chipset you can have up to eight bitplanes, which gives a 256-colour display.

Other options include HAM, and Extra Half Bright. Displays can be shown in one of three basic resolutions, 320, 640 and 1,280 pixels wide. To increase the vertical resolution from 256 you need to use interlacing.

Bitplanes can be scrolled using the hardware. The exact size can be adjusted a little each way, allowing for overscan.

Advanced use includes multiple-playfields. overlaid on top of each other. On the top playfield, colour 0 acts as transparent, the bottom playfield showing through.

Usage: Explained last month, the video display hardware on the Amiga is based around bitplanes, single colour screens. Where a bit is set, a pixel is on, when it is clear, that pixel is off.

Overlaying bitplanes gives more colours:

2 bitplanes:	4 colours
3 bitplanes:	8 colours
4 bitplanes:	16 colours
...up to	
8 bitplanes:	256 colours

The number of bitplanes displayed is set using the "bplcon0" register. This register has some nice goodies in it. Bit 15 is the HIRES enable bit. When set, you are automatically in 640 resolution.

When clear, you are in 320 resolution. The hardware reference manual shows that bits 14 (BPU2), 13 (BPU1) and 12 (BPU0) combined indicate the bitplanes required. Therefore, if you set them to 111 (all on), you would get seven bitplanes – 128 colours.

The missing BPU3-bit required to make a full 256 colours is hidden as bit 4 (not documented in the hardware reference guide). Unfortunately there are only 32 colour palette registers, and anything over 32 requires some really weird programming with selecting eight 32 colour banks. It's a nightmare, so only dabble if you're daring.

For testing purposes, let's set up a basic 320x256 bitplane, with two colours. The bitplane registers should be set up at the start of each frame, so the ideal time to do this is in our Copper list. Add this to the start (you can have it as well as the moving Copper bar, put it in front of the "CopperBar:" label)

```
CopperList:         dc.w
bplcon0,$1200       ; 1 bitplane lo-res
          dc.w      ddfstrt,$0038
          dc.w      ddfstop,$00d0
; Display DMA start/stop
          dc.w      diwstrt,$2c81
          dc.w      diwstop,$2cc1
          dc.w      bpl0pth
Store_H:  dc.w      0
          dc.w      bpl0ptl
Store_L:  dc.w      0
; Pointer to bitplane
;
          dc.w
color01,$0f80
; Foreground colour
;
CopperBar:          ...
the rest of your copper
list
```

What are we doing here? Firstly, we've changed our bplcon0 reference to set us up with one bitplane (bit BPU0 set). We then move on to write to the registers "ddfstrt" and "ddfstop". These define DMA fetching start and stop positions, and rather than worrying about what they mean, just accept that these are the correct values for a 320 wide screen.

The Hardware Reference Guide contains much more information. The next bit is a write to "diwstrt" and "diwstop". These are the display window start/stop positions. This sets up a neat 320x256 screen window in the centre of the display. Much fun can be had tweaking with the $2c81 and $2cc1 values!

Having set up the window and DMA stuff, we can then write to the bitplane pointer register. This is divided into two, the bpl0pth is for the top word of the address, and the bpl0ptl is for the bottom word. Finally we set up color 1 to be bright orange so that we can see anything we put on screen. At the start of "MainEntry", you'll need to add this, just before starting up the Copper bar:

```
MainEntry:          move.w
#$87ff,dmacon(a5)   ; Enable DMA
;
; ---- Set up bitplane ....
          lea       Bitplane,a0
          move.l    a0,d0
          move.w    d0,Store_L
          swap      d0
          move.w    d0,Store_H
; Put bitplane pointer in copper-list
```

You'll also need to add a chunk of memory for the bitplane itself. The correct way to do this would be to allocate some Chip RAM (it MUST be in Chip RAM), but to save time, we've defined it right after our Copper list in the "data_c" section as:

```
;
          cnop      0,8
; Align bitplane to 8 byte boundry
Bitplane: dcb.b     10240,$aa           ; 1
320x200 bitplane
```

Now we're ready to rock and roll. By using a feature of the "dcb.b" function, I'm filling our 10,240 bytes of bitplane RAM with $aa (which, in binary, is 10101010. This makes a neat stripy pattern on the screen). Why 10,240? Well, with 320 pixels across and 8 pixels in a byte it takes 40 bytes to display a line. 256 lines on a PAL display gives us 40x256, which comes to 10,240 bytes.

The contents of the RAM at "Bitplane:" are now displayed on the screen 50 times a second. If you were to write to them, the display would change. You can use the same theory to add more and more bitplanes.

The Copper

Summary: The Copper co-processor is a very simple microprocessor, with only three instructions. A Copper program is called a Copper list. Your Copper list is run automatically every frame (50 times a second) in most applications. If you use interlaced displays (more flicker) you can have two Copper lists, one for the odd frames and one for the even (each one gets called 25 times a second). Of the three instructions, most people only ever use two: WAIT and MOVE.

WAIT waits for a given position on a screen (like, start of scan line 100, for example) and MOVE puts values into custom chip registers.

Usage: The Copper is very easy to use. Out of the three available instructions, it is unlikely you'll need the third (SKIP). Most people stick to WAIT's and MOVE's. A Copper Instruction is 4 bytes long. Here is an example:

```
dc.w $0180,$000f
; move #$00f, $dff180
```

As a comment afterwards, I've shown what it actually does. As you can see, the first word of the instruction contains the register you wish to write to, minus the $dff bit. $dff180, as we have used before, is the register for COLOR00 (background colour).

The next word is the data to write, in this case $00F, or 0 red, 0 green, and full blue. Since all the registers are defined in "hardware/custom.i", we can write this as...

```
dc.w color00,$000f
```

...indeed, it is possible to write macros which allow you to write Copper Assembly language rather than having to delve around with dc.w's. WAIT's are just as simple. Here is an example:

```
dc.w $800f,$fffe
; wait ($0f, $80)
```

This waits for the end of line $80. This is the position at the far right, just before the horizontal blanking gap begins. The vertical wait position is the first byte. So, for example:

```
dc.w $800f,$fffe
dc.w color00,$0f0f
```

...will wait for the end of line $80, and then turn the screen background to magenta. We can use the same procedure to make an entire "Copper bar". Change the Copper list in the listing to read like this...

```
CopperList:         dc.w      bplcon0,$0000
;
; ---- Copper Bar! ....
CopperBar:          dc.w      $800f,$fffe
          dc.w      color00,$0040
          dc.w      $820f,$fffe
          dc.w      color00,$0080
          dc.w      $840f,$fffe
          dc.w      color00,$00d0
          dc.w      $860f,$fffe
          dc.w      color00,$0080
          dc.w      $880f,$fffe
          dc.w      color00,$0040
          dc.w      $8a0f,$fffe
          dc.w      color00,$0000
;
          dc.w      $ffff,$fffe
; End copper-list
```

Note that at the end of our Copper list we use the instruction:

```
          dc.w      $ffff,$fffe
```

This is actually a WAIT instruction, waiting for an impossible position. You need to have this at the end of your list, or you could run into serious visual problems when the Copper whizzes through memory 50 times a second randomly performing instructions...

So! How do we scroll this then? Well, easy. Add this code into the VerticalBlank routine:

```
          tst.b     bar_move
          beq.s     VB_No_Bar           ;
Don't scroll copper-bar
          cmp.b     #$f0,current_line
          bne.s     VB_Not_Done
          clr.b     bar_move
          bra.s     VB_No_Bar           ;
Reached end, stop program.
VB_Not_Done:        lea       CopperBar,a0
          moveq     #5,d7
; 6 lines to move
          moveq     #$00,d0
          move.b    current_line,d0
VB_Move_Bar:        move.b    d0,(a0)
    ; New move line
          add.w     #$08,a0
; Next copper WAIT
          add.b     #$02,d0
          dbra      d7,VB_Move_Bar
          add.b     #$01,current_line  ;
Move down a line
VB_No_Bar:
```

This is all basic code that we have seen before. When the "bar_move" flag is set, this routine will go through our six Copper WAIT() instructions and add one to their vertical wait position.

Then, when the vertical position reaches $f0 (240), we clear the flag. To make the Copper bar start moving, we need a couple of instructions at MainEntry:

```
MainEntry:          move.b
#$30,current_line
          st.b      bar_move
    ; Enable copper-bar scroll
ME_Wait: tst.b      bar_move
          bne.s     ME_Wait
; Wait till it is finished..
          rts
;
current_line:       dc.b      0
bar_move: dc.b      0
```

And bingo. When our program starts, we set up the starting line, and then set the flag. The interrupt routine picks this up and starts scrolling the bar.

In the meanwhile, we go into a loop waiting for that flag to clear. Eventually, the Copper line will reach line $f0, and the flag will be cleared. At this point, the loop stops, and the program will quit. If you add this lot in without removing the existing blue screen flicker code, you'll get quite an impressive visual display!

Other hardware

In this article we've talked about the main hardware present in the Amiga. Of course, there's stacks more.

Here's a brief summary of some of the other parts which you are able to access:

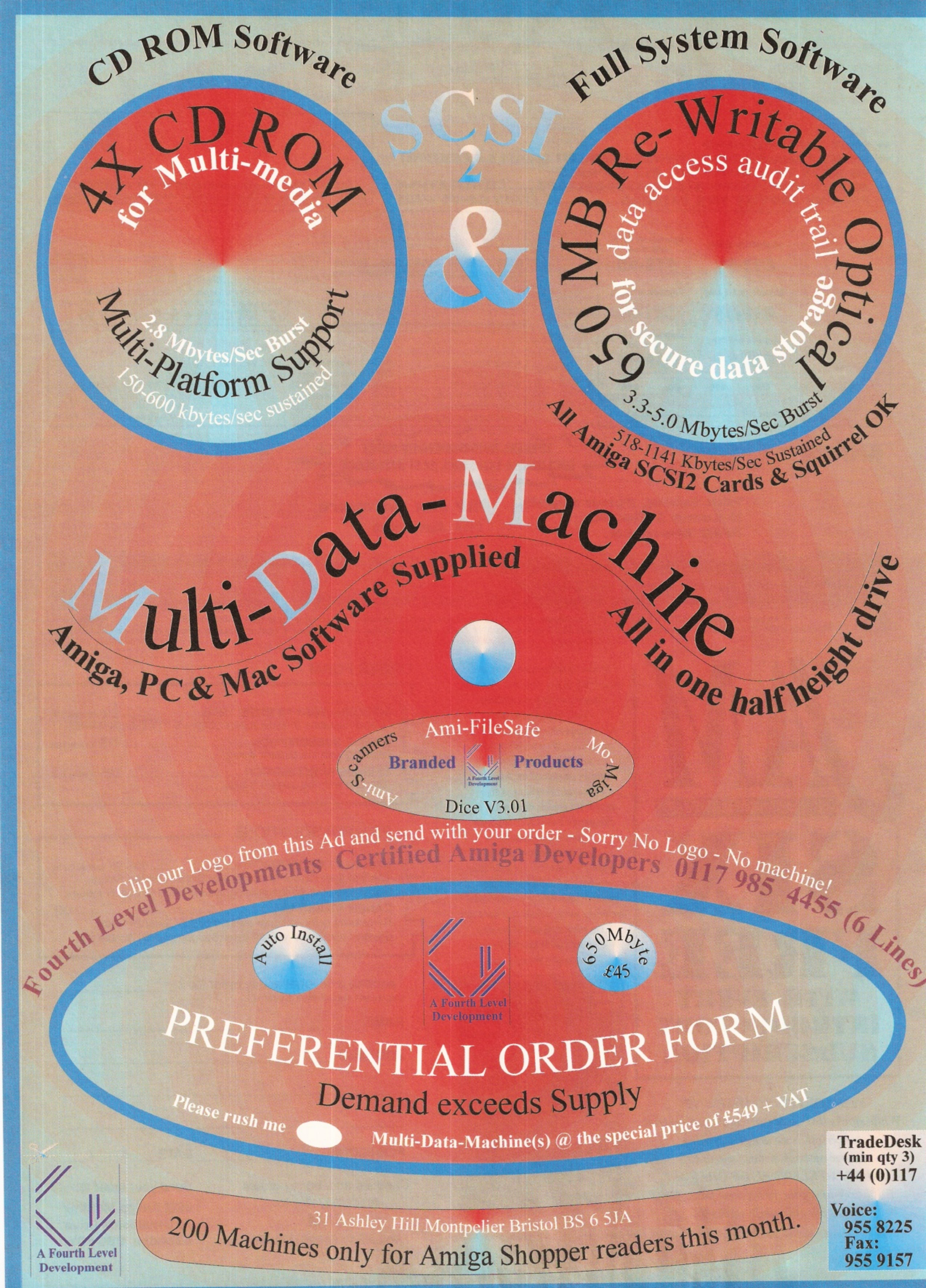
● **Sprite hardware**
Touched on lightly in this article, sprites have lots of uses. As well as making handy mouse pointers, they can be joined together to make quite large hardware generated displays. In the computer game Diggers five AGA 64-pixel-wide sprites were joined together to make an entire new playfield to give us a whacking three playfields to use. (See the Bitplane hardware boxout for a talk on playfields).

● **Disk hardware**
Don't *ever* touch. Unless you are writing a replacement for Commodore's "trackdisk.device", and that is exceptionally unlikely, you have no reason to access the floppy hardware direct. There is nothing to gain except a tiny amount of additional speed. There is, however, stacks to lose. For example, you can't copy stuff to it or from it to hard drives. And, you have to write your own file handling routines rather than using those in "dos.library".

● **Serial hardware**
Opening "serial.device" is the normal method of communicating with the serial port. You can, however, access the serial hardware direct. As long as you process the two serial interrupts (Receive buffer full (RBF) and Transmit buffer empty (TBE)) you can write some highly efficient custom serial code. This is most useful for computer games where a serial link-up is required, and speed of processing and reliability is 100 per cent essential.

And there's more too. If you wish to find out more information, the best book you can buy on the subject is the Hardware Reference Manual, Edition 3. This covers everything up to and including the ECS chip-set:

Amiga Hardware Reference Manual (382 pages). Published by Addison Wesley. It costs about £25.



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DICE Part 5

Having suffered the last two months at the hands of DICE's debugger, it is definitely time to move on. **Toby Simpson** *would like to take the opportunity to look at some truly remarkable C programming.*

Hello and welcome to C madness, on biblical levels. C, as I have harped on about so often I'm sure you're sick of it, is a language that is open to incredible abuse. And for some people, this abuse can be fun. Just how unreadable can a C program be? Totally.

Take a good long look at the C listing on page 78. You're never going to guess what that is, not in a million years. Indeed, if anyone out there can explain how it works I'd be most interested in hearing from you!

It is an entry in the The 7th International Obfuscated C Code Contest (1990), by Diomidis Spinellis from Greece. It won the "Best Language Tool". In only 1,532 bytes of source code the author has created a BASIC interpreter. Yes, a *working* BASIC interpreter. It supports 26 levels of FOR...NEXT nesting, 999 levels of GOSUB nesting, dynamic program allocation, loading and saving of programs and a basic line editor. Just to prove it works, after the C listing, there is an example program supplied written by the author: A Lunar Lander simulator. After running the interpreter and the example BASIC listing, type:

```
Old LANDER.BAS Run
```

If you're familiar with BASIC at all, or indeed C, or indeed programming in *any* form, you'll know that writing compilers and interpreters is a heavy task. It takes a lot of time, and results in huge applications. (Look at any of the BASIC interpreters available for the Amiga). This one does the whole lot in 1,532 bytes.

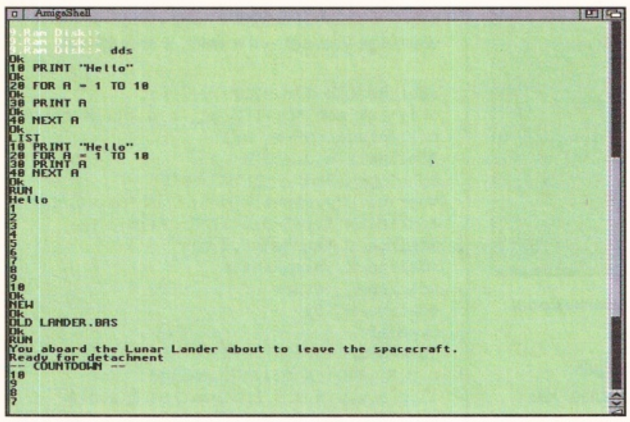
Granted, it's 100 per cent unreadable, but that's not the point. This demonstrates a deep understanding of C, and how languages work. I am totally flabbergasted by this one. Try this:

```
10 FOR A = 1 TO 10
20 PRINT "Hello"
30 PRINT A
40 NEXT A
RUN
```

It *really* does work!

If you have not guessed from the listing, this is definitely not how to write C, and it certainly proves just *how* open to abuse C is.

Style is important. Structure is important.



Running the basic interpreter. Yes, it works. 1,532 bytes of source code. Amazed? I was.

Writing bad code is a short term affair, all of the benefits occur whilst you are writing it. Then they all end – any gains you may have made are lost immediately when it comes to debugging, making updates, or re-using code for other projects you may be writing.

Taking the time to comment routines and code as you go pays off big-time a few months later when it counts. Here are some tips to make your C code more comprehensible:

● Avoid potential traps

C has some serious design faults. One of the issues is that compilers cannot spot some fatal bugs, simply because the syntax is correct. Take this example:

```
if (loop = 10)
        {
        printf("Loop was 10\n");
        }
```

The fault there is that the = should have been a ==. The above code will compile just fine, however, because compilers aren't clever enough to think "Hey, you didn't mean that, did you?". Train yourself to program so that this sort of potential fault happens rarely.

With a little thought most code which ends up like the above could probably be written without these mistakes.

● Comment functional blocks of code

Commenting can be taken to silly proportions. Things like...

```
    loop++;                     /* Add one to
the loop counter */
```

...are wasted. The code is self explanatory and does not require a comment. Save your commenting skills for blocks of code:

```
    if (fib.fib_DirEntryType > 0)
            {
            /*
            **        Got a directory,
recursively scan it:
            */
            is_newsgroup = FALSE;         //
Isn't a newsgroup, has a dir in it

            if
(!(ScanDirForNewsgroups(full_path)))
                    {
                    UnLock(lk);
                    return FALSE;
                    }
```

Note that in the above, I used the // to do a one line comment. // is a feature of C++, but most modern C compilers allow it for comments, including DICE.

● Think building blocks

Try and make routines as general purpose as possible. When you're writing a function to open a requester, for example, it is well worth making it as self contained as possible.

This way, when you need to nick it for another program it should transplant perfectly. Also, at a later date, when you come to re-writing a chunk of code to make it more efficient, you can simply plug in a new routine, without having to worry about a total re-write or massive re-organisation.

● Sensible structure and variable names

One of the least amusing errors you can have is when you are plugging in some code from another program, or which someone else has

▶ 78

Getting the full version of DICE

On the March Coverdisk we gave away a special version of DICE 3. Obviously the authors of DICE wouldn't make much money if we gave away the whole product, so it was especially cut down. It has the following limitations:

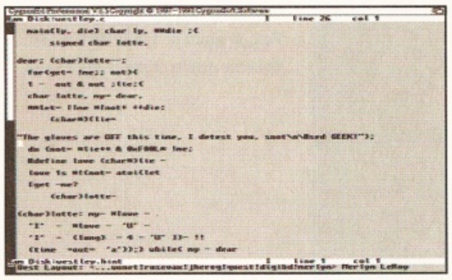
- **You can't use bitfields or floating point.**
- **The maximum executable program size is 40K.**
- **Each source file can only have up to four functions in it.**
- **You can't use this version of DICE to generate commercial applications, or for work purposes. It is for private home usage by Amiga Shopper readers only.**

If you're getting into this now and fancy the entire product, together with a 450-page manual (which is hard reading and leaves a little to be desired), at a fantastic *£30 off the retail price*, then you can obtain it from Amiga Shopper mail order on page 34.

You can also get it from the UK distributors, Fourth Level Developments:

Fourth Level Developments, 31 Ashley Hill, Montpelier, Bristol, BS6 5JA.
Tel: 0117 955 8225 Fax: 0117 955 9157
E-mail:
dicecsales@flevel.demon.co.uk (for sales)
dicecinfo@flevel.demon.co.uk (for general info)

You'll need a full version to make use of the revision control system and, also, without it you are limited to four functions per file, which could result in some cut 'n' pasting with the Finder application!



Winner of 'Best Layout' in the 7th International Obfuscated C Code Contest (1990).

written, only to find that it won't compile because of clashes with global variables you already have.

This can be avoided entirely if you have a little think before creating a global variable. The first question to ask yourself is "do I really need this? Can I solve it with local variables, or function arguments?" If the answer is "No, I really need a global", then try shoving a prefix in front of it.

With a two or three letter prefix, the chances of a clash are sufficiently remote to be negligible. If you make all variables which are related share the same prefix, you can easily search for chunks of code which use it.

This month we've looked at how not to write C programs, as well as putting a few pointers on general style forward. C programming is a very personal affair, different people have different styles. You'll develop your own over time, but it *is* worth the effort of getting used to a style of programming which is neat, well organised and well documented.

Next time around, as well as some news on compilers, we'll look at a couple more of these programming goodies. In the meanwhile, if you have any weird C programs you think we could all look at, send them in, and maybe we'll do a whole bunch on the Coverdisk.

The C program from Hell – Part 1

A 1,532 byte BASIC interpreter!

Type the following listing in exactly as shown, and save it as "dds.c". It could be a strain on the eyes, so good luck. For those with a typing phobia, it will be on next month's Coverdisk, and has been uploaded to the amigashopper conference on CIX. This has been tested under DICE and SAS/C. Ignore any compilation warnings you get – if it links, it should run.

```
#define O(b,f,u,s,c,a)b(){int
o=f();switch(*p++){X u:_ o s b();X c:_ o a
b();default:p--;_ o;}}
#define t(e,d,_,C)X
e:f=fopen(B+d,_);C;fclose(f)
#define U(y,z)while(p=Q(s,y))*p++=z,*p=' '
#define N for(i=0;i<11*R;i++)m[i]&&
#define I "%d %s\n",i,m[i]
#define X ;break;case
#define _ return
#define R 999
typedef
char*A;int*C,E[R],L[R],M[R],P[R],l,i,j;cha
r B[R],F[2];A m[12*R],malloc
(),p,q,x,y,z,s,d,f,fopen();A Q(s,o)A
s,o;{for(x=s;*x;x++){for(y=x,z=o;*z&&*y==
*z;y++)z++;if(z>o&&!*z)_ x;}_
0;}main(){m[11*R]="E";while(puts("Ok"),get
s(B)
)switch(*B){X'R':C=E;l=1;for(i=0;i<R;P[i++
]=0);while(l){while(!(s=m[l]))l++;if
(!Q(s,"\"")){U("<>",'#');U("<=",'$');U(">=
",'!');}d=B;while(*F=*s){*s=='"'&&j
++;if(j&1||!Q(" \t",F))*d++=*s;s++;}*d--
=j=0;if(B[1]!='=')switch(*B){X'E':l=-1
X'R':B[2]!='M'&&(l=*--
C)X'I':B[1]=='N'?gets(p=B),P[*d]=S():(*(q=
Q(B,"TH"))=0,p
=B+2,S()&&(p=q+4,l=S()-
1))X'P':B[5]=='"'?*d=0,puts(B+6):(p=B+5,pr
intf("%d\n",S
()))X'G':p=B+4,B[2]=='S'&&(*C++=l,p++),l=S
()-1 X'F':*(q=Q(B,"TO"))=0;p=B+5;P[i
=B[3]]=S();p=q+2;M[i]=S();L[i]=l
X'N':++P[*d]<=M[*d]&&(l=L[*d]);}else
p=B+2,P[
*B]=S();l++;}X'L':N printf(I)X'N':N
free(m[i]),m[i]=0  X'B':_ 0 t('S',5,"w",N
fprintf(f,I))t('O',4,"r",while(fgets(B,R,f
))(*Q(B,"\n")=0,G()))X 0:default:G()
;}_
0;}G(){l=atoi(B);m[l]&&free(m[l]);(p=Q(B,"
"))?strcpy(m[l]=malloc(strlen(p
)),p+1):(m[l]=0,0);}O(S,J,'=',==,'#',!=)O(
J,K,'<',<,'>',>)O(K,V,'$',<=,'!',>=)
O(V,W,'+',+,'-',-
)O(W,Y,'*',*,'/',/)Y(){int o;_*p=='-
'?p++,-Y():*p>='0'&&*p<=
'9'?strtol(p,&p,0):*p=='('?p++,o=S(),p++,o
:P[*p++];}
```

Then type this in to an editor and save it in the same directory as "dds.c" as "LANDER.BAS":

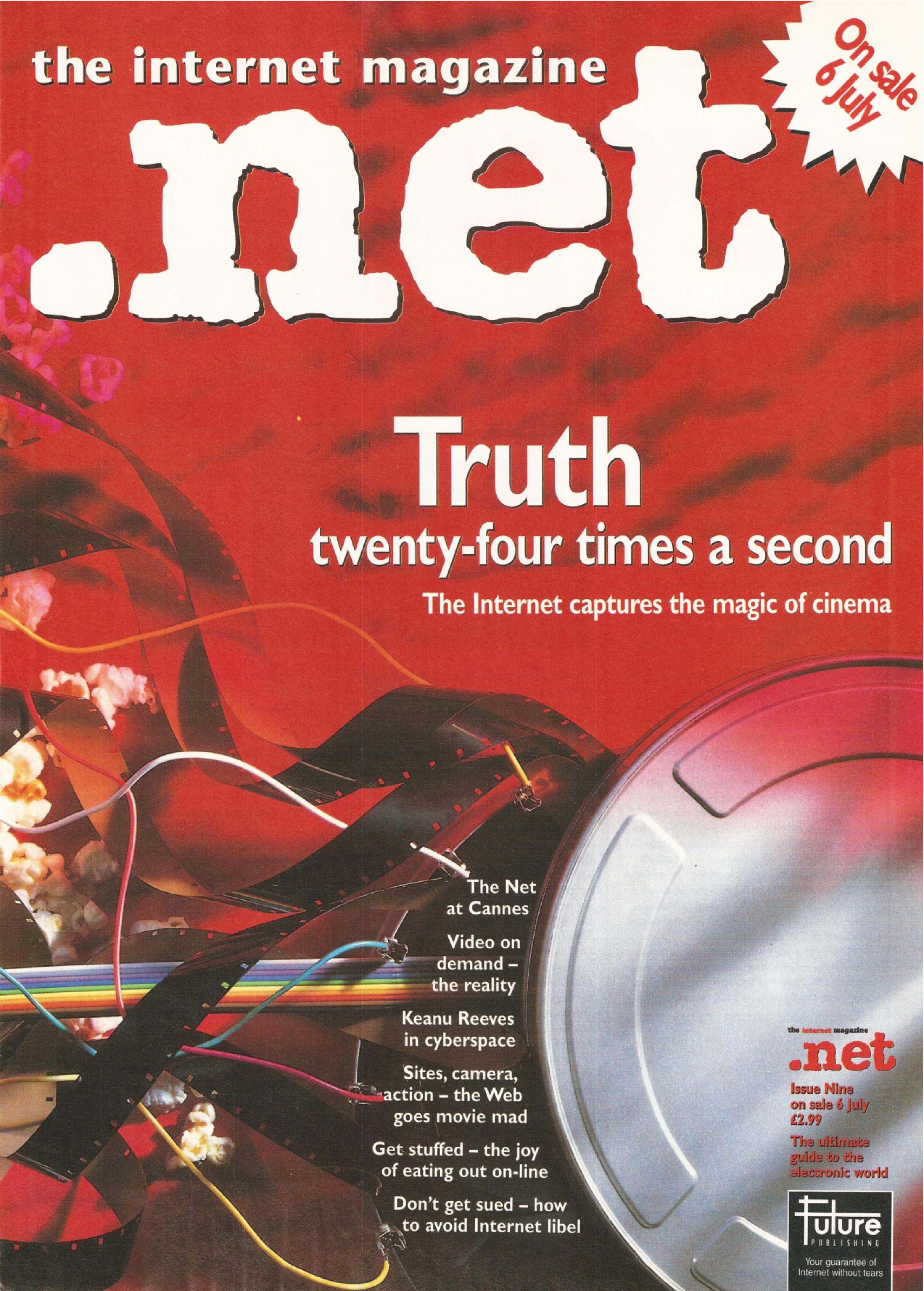
```
10 REM Lunar Lander
20 REM By Diomidis Spinellis
30 PRINT "You aboard the Lunar Lander
about to leave the spacecraft."
60 GOSUB 4000
70 GOSUB 1000
80 GOSUB 2000
90 GOSUB 3000
100 H = H - V
110 V = ((V + G) * 10 - U * 2) / 10
120 F = F - U
130 IF H > 0 THEN 80
135 H = 0
140 GOSUB 2000
150 IF V > 5 THEN 200
160 PRINT "Congratulations! This was a
very good landing."
170 GOSUB 5000
180 GOTO 10
200 PRINT "You have crashed."
210 GOTO 170
1000 REM Initialise
1010 V = 70
1020 F = 500
1030 H = 1000
1040 G = 2
1050 RETURN
2000 REM Print values
2010 PRINT "    Meter readings"
2015 PRINT "    --------------"
2020 PRINT "Fuel (gal):"
2030 PRINT F
2040 GOSUB 2100 + 100 * (H <> 0)
2050 PRINT V
2060 PRINT "Height (m):"
2070 PRINT H
2080 RETURN
2100 PRINT "Landing velocity (m/sec):"
2110 RETURN
2200 PRINT "Velocity (m/sec):"
2210 RETURN
3000 REM User input
3005 IF F = 0 THEN 3070
3010 PRINT "How much fuel will you use?"
3020 INPUT U
3025 IF U < 0 THEN 3090
3030 IF U <= F THEN 3060
3040 PRINT "Sorry, you have not got that
much fuel!"
3050 GOTO 3010
3060 RETURN
3070 U = 0
3080 RETURN
3090 PRINT "No cheating please! Fuel must
be >= 0."
3100 GOTO 3010
4000 REM Detachment
4005 PRINT "Ready for detachment"
4007 PRINT "-- COUNTDOWN --"
4010 FOR I = 1 TO 11
4020  PRINT 11 - I
4025  GOSUB 4500
4030 NEXT I
4035 PRINT "You have left the spacecraft."
4037 PRINT "Try to land with velocity less
than 5 m/sec."
4040 RETURN
4500 REM Delay
4510 FOR J = 1 TO 500
4520 NEXT J
4530 RETURN
5000 PRINT "Do you want to play again? (0
= no, 1 = yes)"
5010 INPUT Y
5020 IF Y = 0 THEN 5040
5030 RETURN
5040 PRINT "Have a nice day."
```

On the Coverdisk



This month, the Finder program and an executable are included. Unfortunately this month's listing didn't quite make it in time (my own fault, sorry!).

Next month, the above program listing and an executable will be included to save the typing, together with a whole load more "C Hacks" like it, including the 12 days of Christmas generator I mentioned last month. I chose to use the BASIC interpreter instead, as that was a far more incredible feat of programming!


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Are you being served?

There are indeed several reasons for setting up your Amiga as a server for other Internet users to access. **Darren Irvine** *lets you in on the secret.*

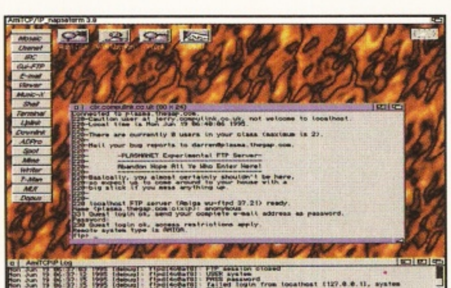
Now that BT have finally seen the light and reduced the price of local calls at the weekend to something approximating a reasonable level, it has become feasible for anyone with SLIP- or PPP-type Internet access to set their computer up as a temporary server. Of course, you might ask yourself why you would possibly want to do this.

There are several reasons for setting your Amiga up as a server for other Internet users to make use of. The first is as an ftp server if you have files that you want to make available for anyone to download – for example, you might be a musician and want to make your wonderfully-crafted OctaMED modules available for the delectation of other Internet users.

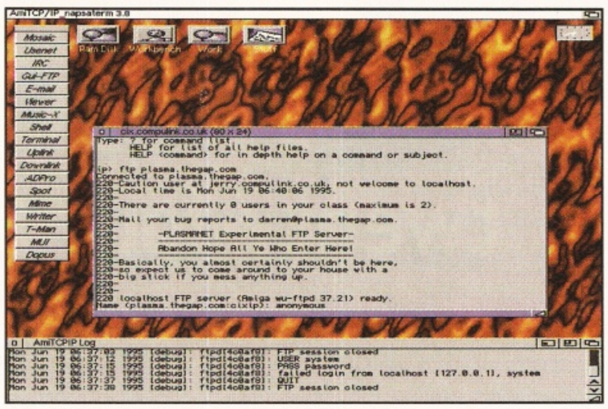
Another, possibly more useful reason is to accept Telnet log-ins across the Internet. Doing this will allow you to make any text-based program running on your Amiga available to any Internet user anywhere in the world.

Your first thoughts on this subject might run along the lines of "why would I want anyone else to be able to run programs on my Amiga?", but if you are running a multi-user BBS system, how would you like to be able to let multiple users worldwide have access to your board? Telnet will make this possible. Note that, in order to fully test either ftp or Telnet services on your computer, you will need the use of at least one other Internet account – preferably a text-based one such as CIX or Delphi.

This is to enable you to remotely log on to your Amiga to make sure that the services are working OK. Note that you won't actually need two machines if you have a text-based account



Once log-in is completed, FTP reports remote system type as Amiga – something you don't see everyday.



Using CIX Internet gateway to test the FTP Daemon running on my Amiga, logging on as Anonymous.

somewhere – you can Telnet from your machine to the remote service and then ftp, or Telnet, back again to check things out.

Plagued by Daemons

The programs that make use of your machine as a server are known as "Daemons" – processes that run in the background monitoring a particular TCP/IP port for any activity and controlling the way in which any requests on that port are dealt with. There is a specific Daemon for any sort of service that you wish to set up on your computer. Each Daemon is typically called the same name as the service it controls, with the letter "d" on the end. Thus, the Daemon for ftp is called "ftpd" and the one for Telnet is called "Telnetd" – fairly exciting stuff, I'm sure you'll agree.

There are a number of implementations of each flavour of Daemon that have been developed for the Amiga, available from Aminet. The most stable ftp Daemon that I have tested is one developed by the maintainers of the original Aminet site themselves, the Washington University. The files you will need are available in the directory /comm/tcp on any of the Aminet mirrors and the archive names are as follows:

```
ftp daemon        wu-ftpd-37.21.lha
telnet daemon     telnetd2_0.lha
```

Setting up FTP

Although the Washington University's ftp Daemon comes complete with a nice Amiga-style installer, there are a number of configuration files that need to be set up in your amitcp:db directory, and these can sometimes be slightly obscure to say the least.

The first, and in some ways most important configuration file is "ftpaccess". This file controls which directories on your machine are accessible via ftp and which definitely are not. The installation procedure will create an outline version of this file and you should ensure that it has entries similar to the following:

```
banner AmiTCP:db/welcome.msg
```

This is the message that will be displayed to any users accessing your Amiga using ftp.

```
allowdir stuff:pub
cdpath stuff:pub
```

I have created a directory called "pub" on my stuff: partition and the two commands above ensure that this directory and any below it are the only ones accessible via ftp.

```
denydir SYS:
denydir WORK:
```

Just to be on the safe side, these two commands ensure that neither of my other two hard disk partitions are accessible using ftps "cd" command.

The next file to create is "ftpdir" in amitcp:db, and contains one line which is the directory which ftp users will start off in. The file on my system contains the line:

```
stuff:pub/
```

Next, create a file in the same directory called "ftpusers" – this contains a list of any users to whom you wish to grant ftp access. A typical ftpusers file will contain entries such as:

```
root
anonymous
```

In order to make your set-up work correctly for anonymous ftp access, you will need to add a user to your passwd file called "ftp". The entry in passwd should be as follows:

```
ftp||100|100|anonymous ftp|stuff:pub|shell
```

Note that the initial log-in directory for ftp users is repeated here, and that the second field – password – is blank with no characters between the first two bars.

The final configuration file that you will need to modify is the already existing "inetd.conf" in, as usual, the amitcp:db directory. This file contains a list of all services that your AmiTCP set-up can perform and you should add a line letting AmiTCP know about your newly created ftp service like this:

```
ftp stream tcp nowait root
amitcp:serv/ftpd in.ftpd
```

One other file that you might like to set up is a welcome.msg text file – this will be seen by any users ftping to your system. This file on my system looks like:

```
Caution user at %R, not welcome to %L.
Local time is %T.
There are currently %N users in your class
(maximum is %M).
Mail your bug reports to %E.

PLASMANET Experimental FTP Server
Abandon Hope All Ye Who Enter Here!

Basically, you almost certainly shouldn't
be here, so expect us to come around to
your house with a big stick if you mess
anything up.
```

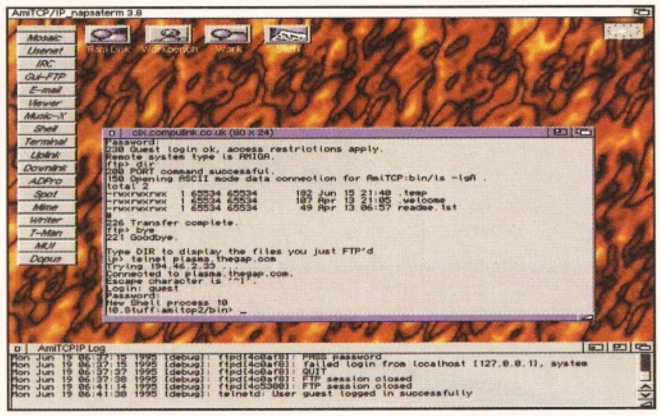
Note that the variables that start with a percentage sign are mapped as follows to information set-up in the file "ftpaccess" – a full explanation of these variables is given in the AmigaGuide file supplied in the archive.

```
%E - archive maintainer - my E-mail
address
%R - remote site address - remote user's
domain name
%L - local site address - my domain name
%N - number of users currently logged on
to my machine
%M - total users who can log on
concurrently
```

Once you have set these files up, you can test the system by first Telnetting to a remote dialup site on which you have an account such as CIX or Delphi, and then using ftp to connect back to your machine. If you don't have such an account or know anyone who does, you'll need to ask someone else with a SLIP or PPP account to connect to their access provider and directly try an ftp session with your machine.

If neither of these options is open to you, you can do a limited test of your machine's ftp serving by ftping to "localhost" on your machine. Oh, one other thing you'll need to do is to put the files that you want to make available in the directory that you have created for ftp users – there would be little point in letting people log on if there was nothing for them to transfer.

Having tested FTP the CIX gateway is used to test Telnet too – note that the "guest" user shows up as logged in on the AmiTCP log window and the FTP session is logged as closed.



Setting up for Telnet

Setting up your Amiga for incoming Telnet sessions is slightly less challenging than the equivalent process for ftp. The archive, however, doesn't have an install procedure and you must manually copy the needed files to their destination directories and create the configuration files.

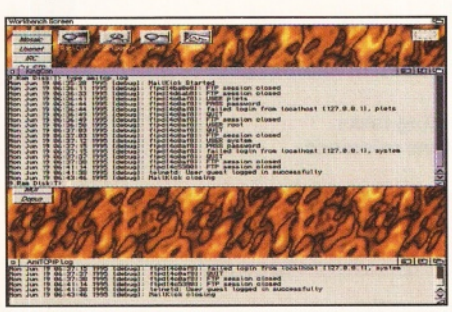
Firstly, copy the file actually called "telnetd" to your amitcp:serv directory. Next, copy the file "fakesr.device" to devs: This file handles i/o between Telnet sessions and programs that normally expect i/o from the serial port such as BBS systems.

In a similar fashion to the ftp Daemon installation, you must add a line to the inetd.conf file in amitcp:db telling the AmiTCP set-up about the Telnet service. Add a line to the bottom of this file as follows:

```
telnet stream tcp nowait root
amitcp:serv/telnetd
```

Unlike ftp, Telnet does not have an anonymous user and you must set up any users that you want to have Telnet access in your passwd file, complete with passwords. To add a new user, simply edit the passwd file in amitcp:db and copy one of the existing lines, changing the first field to the user name that you want to add.

The second field is the password associated with this user and initially this should be blank. A typical new line to add a user called "newuser" would be:



You can check up on ftp and Telnet sessions by typing up the amitcp.log file which is found in t:.

```
newuser||100|100|telnet guest
account|S:|*newshell * from s:telnet_log-
in
```

The two numbers here control user group and access and you should consult the AmiTCP documentation for more details on setting up different user groups – for now the default values will do. To actually set up a password for this new user, open a Shell and type:

```
passwd /yourusername/
```

You will be prompted for the required password, and then asked to confirm it. The "S:" part of this line tells the Telnet Daemon that incoming Telnet users will initially reside in your "S:" directory – you can change this to whatever you require. The last part of the line tells the Daemon to run an Amiga Shell as the default CLI for Telnet users and to execute the file "s:telnet_log-in" – you can set up this file to automatically run whatever program you want Telnet users to have access to – typically a BBS or MUD system. If you leave this file blank, Telnet users will have direct access to AmigaDOS.

This in itself can look odd – for example, running on a PC and seeing an Amiga-style prompt, but in general it's not the sort of thing you will want to do. Remote Telnet users can type "format hd0:" as easily as you can – you have been warned.

One other thing to be aware of when allowing Telnet access to your Amiga – if the remote user performs any action that would cause a window to be opened on your Workbench (for example, trying to access a device that doesn't exist) you will have to be around to manually close any requesters generated – otherwise the remote user's process will hang.

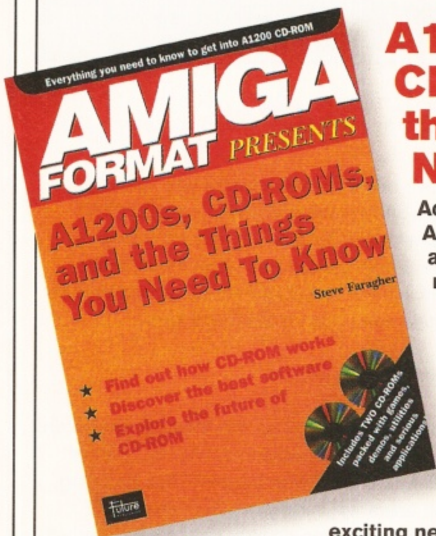
It is possible to get round this to a certain extent by installing the Workbench hack "noreq" which, again, is available from Aminet. In general, the only programs that you should make available via Telnet are the same ones that you would make available via a dialup line and in almost all cases this means some sort of BBS.

Once again, to test your Telnet service you will really need access to another account. It is possible to Telnet to "localhost", but, again, this will not provide a fool-proof test of your system.

Next month, we'll take a look at setting your Amiga up as an HTTP server on the World Wide Web, making your HTML pages available to anyone who wants to have a look, at least for as long as your phone bill can stand it. ■

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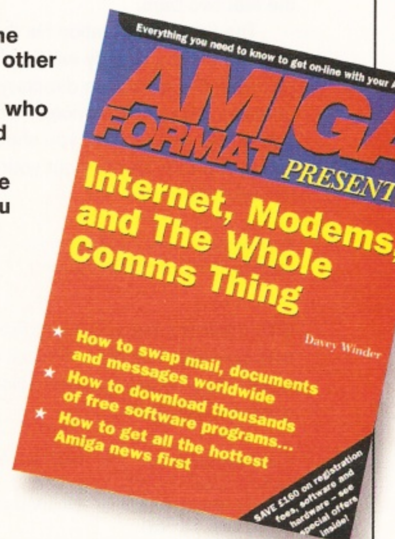
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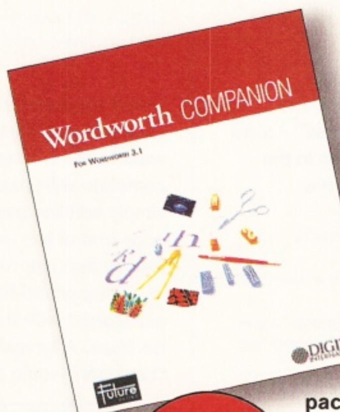
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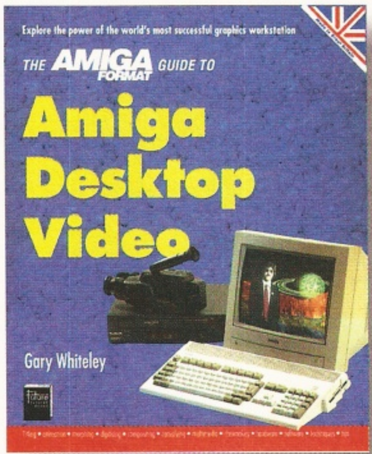
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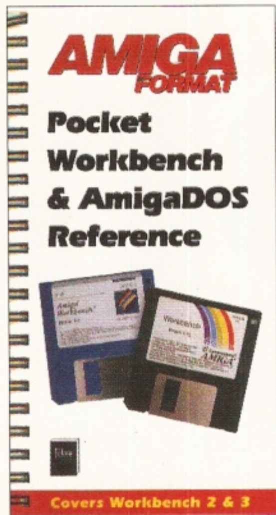
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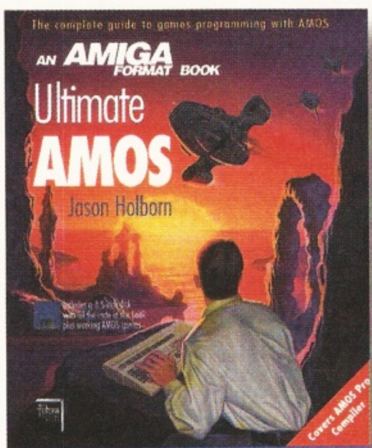
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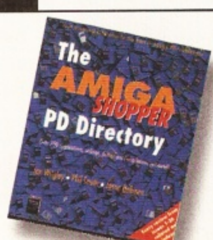
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Jason Holborn *explores the fascinating world of stereoscopic graphics, paints a picture with a new kids' paint program, edits his Imagine textures and still finds time to sort out his finances.*

The PD scene never ceases to amaze me, constantly churning out useful products to wow the masses. It's only after you've played around with these programs that you wonder how you ever managed without them.

Stereopticon

Ernest Ruckle

With a name like Stereopticon you'd be forgiven for thinking that this is a utility designed to enable you to create your own stereogram images; those weird and wonderful 3D 'magic eye' pictures that has caused so much eye strain over the last couple of years.

However, author Ernest Ruckle has resisted the temptation of producing yet another stereogram program. Despite the similarities, Stereopticon is actually a tool which creates true stereoscopic images. These are a lot easier to view than magic eye pictures and are much easier on the eye.

So what's the difference? They may sound very similar, but stereoscopic images and stereograms are as alike as your average Amiga and PC owner. Stereoscopic images are a little like the weird red and green (or, as they used to be, red and blue) 3D pictures you sometimes find on the back of breakfast cereal packets.

As the author points out, however, Stereopticon isn't a lot of use unless you've got a pair of 3D glasses. Ernest supplied us with a pair, but you'll have to source your own.

Stereopticon works by converting a set of 8-colour flat pictures into one 32-colour stereoscopic image. Each flat picture becomes a 'plane' within the 3D image and it's quite possible to use up to 24 planes within a single image to create a truly impressive 3D effect.

Each plane is offset and then simply overlaid on top of the previous planes. Stereopticon achieves this by automatically splitting a plane into its red and blue (right and left) components.

Being something of a sceptic, I wasn't expecting Stereopticon to work particularly well, but I stand corrected – the images that this program produces are some of the best 3D stereoscopic images I've ever seen (and I've seen Jaws 3D!).



This image, created with Stereopticon, may look a mess when viewed normally, but you'll be amazed at the feeling of depth you get when it's viewed through a pair of 3D glasses.

If you want to experience a truly new dimension in Amiga graphics (if you'll pardon the pun) then get Stereopticon. The program is available from Ernest Ruckle, Apartment 8, Manor Court Apartments, Cork Road, Waterford, Ireland.

Rating 92%

Artistix 3.0

Black Dragon Design

Europress may have designed AMOS to be the ultimate games creation package, but it's probably been used to create more educational and creative packages than anything else. Paint programs, in particular, seem to be a firm favourite amongst AMOS coders – perhaps it's got something to do with the ease of use and power of AMOS's impressive graphics commands. However, paint programs aimed at adults aren't very popular – kids, though, are spoilt for choice.

The latest PD paint program to be released is Artistix 3.0, an AMOS-generated program aimed at junior artists. Artistix 3.0 has a front end that has been tailored to young children.

Boasting large and colourful buttons, navigating your way around Artistix is so easy that you don't even need to read the manual which, in fact, is a very good thing as the author was obviously too bone idle to write any form of documentation (nope, there isn't even a 'greets' list!).

Remember that the range of painting tools on offer has been tailored to children so don't expect any complicated perspective and animation tools – basic freehand, boxes, airbrushes and assorted 'weird' effects are definitely the order of the day here.

Artistix 3.0 may not offer any real threat to even the most basic commercial paint program but kids will love it. Artistix 3.0 costs £5 and is available from Black Dragon Design, 4 Alloe Field Place, Illington, Halifax HX2 9ES.

Rating 85%



Illusions is more like Jeff Minter's 'Trip-a-Tron' than any paint program I've come across.

Illusions

Black Dragon Design

Having cut their teeth on Artistix 3.0, the boys from Black Dragon Design (contact details above) have also released Illusions, a paint package which they describe as 'experimental'.

Quite why Illusions is experimental is completely unclear because it is nothing more than a mish-mash of strange painting tools and the sort of user interface that can only be described as er... different.

It's a little like the user interface employed by TV Paint 3.0 – that is, it uses lots of 'floating' menus rather than the strip of icons more popular within Amiga paint programs. Although this approach does take some getting used to, it works surprisingly well.

The most interesting of the many drawing menus Illusions has to offer is its Effects menu, offering a wide range of unusual painting tools which you wouldn't find in a conventional paint program.

These include Melt Brush (makes the background appear to er... melt), Fountain Brush (create wonderful firework and fountain effects), Spiral Blast (a weird, spiralling triangle effect), Fractal Generator (creates a julia set fractal window in a selected rectangle), Explosion Pen (creates an exploding starfield), Electric Lines (random lines similar to electricity) and so on.

Illusions is a strange program. It's not powerful enough to attract graphics fans more used to the likes of Brilliance or DPaint and it's too complicated to appeal to children. Indeed, it's hard to imagine anyone wanting to use it as a serious graphics tool at all.

What it does do, however, is to provide you with a very enjoyable method of killing the odd hour or two. Creating images using Illusions's weird and wonderful effects is a little like playing with Jeff Minter's 'Trip-a-Tron' (anyone remember that one?!) light synthesiser. That is, pointless but great fun.

Rating 78%

ImageStudio 2.0

Seasoft Computing

Thanks to Shareware packages like ImageStudio, you don't need to spend large amounts of cash on products like Photogenics, ImageFX or Art Department Professional to realise the graphic potential of your Amiga. ImageStudio is a Shareware image processing program that, as the author spends a great deal of time pointing out, more than rivals any of its commercial counterparts.

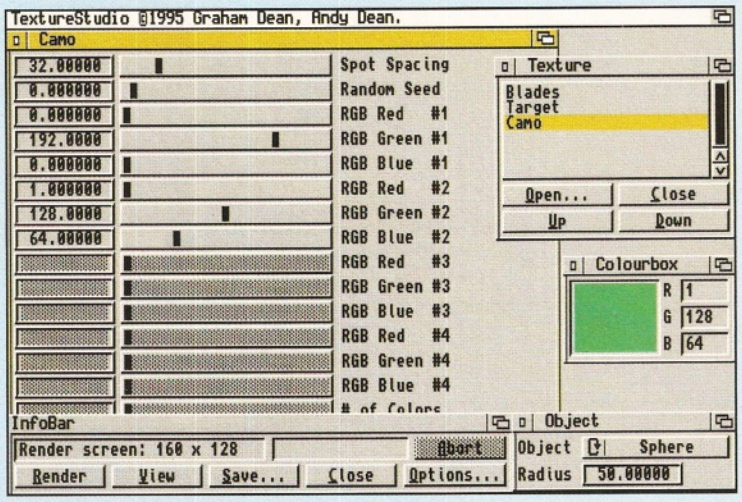
In a number of comparative tests carried out by the author, ImageStudio actually performed better than all its commercial rivals – reducing an 800x600 pixel 24-bit image to just 256 colours took just 51 seconds, compared to the 78 seconds taken by ImageFX.

Version 1 of ImageStudio was a breakthrough in powerful PD software. Version 2.0 improves upon the original considerably.

New features in ImageStudio 2.0 include a fully featured ARexx interface (which is ideal for creating image processing batch files), online AmigaGuide-format help, improved colour reduction, improved HAM rendering, standard Commodore Installer, file notification, 'drag and drop' loading via a Workbench, AppIcon and – best of all – it costs only £10 to obtain the full program.

Add these new features to ImageStudio's existing line-up of powerful image processing convolutions and operators and it doesn't take a great deal of brain power to realise just what a bargain ImageStudio is.

Rating 92%



Texture Studio's front end may look complicated, but it's essentislly a texture exploration program.

Texture Studio

Seasoft Computing

LightWave may have stolen the limelight but Impulse's Imagine continues to be generally regarded as the most widely used Amiga raytracing program available. There's a very good reason for this too – over 160,000 Amiga owners managed to get their hands on the program completely free of charge when it appeared on the Coverdisk of our sister magazine, Amiga Format.

Since then, Impulse have upgraded the program and many of those thousands of Amiga Format readers have upgraded too, keeping Imagine at the top of the raytracing pile in the process.

One area of Imagine that has always been lacking, however, is the ability to create your own textures. OK, so Impulse are kind enough to provide Imagine owners with a fairly extensive range of textures – including brick, camouflage, and checks – but what do you do if the texture you need isn't available?

Not a lot. That is, until now. As its name suggests, Texture Studio is a godsend of a utility which can be used to modify Imagine textures. You still cannot, however, create your own textures from scratch, but, hey, anything is better than nothing!

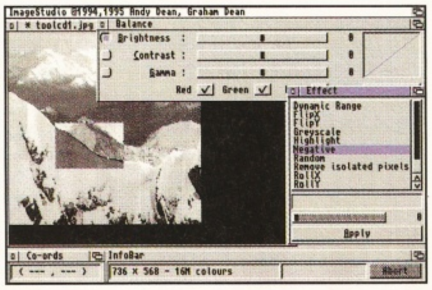
Texture Studio is designed primarily as a tool which can load and save Imagine textures. Once loaded, you can quickly and easily adjust any of the texture's various parameters simply by adjusting a set of slider gadgets or – if you prefer – by entering values.

Many aspects of textures can be adjusted, including axis, alignment, lighting, colour, size and so on. You can even perform a test render of your texture so you can see whether it looks better for the experience or just a complete mess.

Texture Studio is a little strange as it's something of a missed opportunity. In effect, it offers little more than the ability to 'explore' predefined textures by changing various parameters and then test rendering them to view the effect.

▶ 86

Check out the Coverdisk

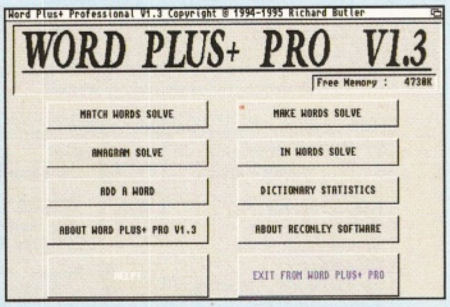


Rated as a Star buy, the exclusive AS version of ImageStudio is on this month's disk 2.

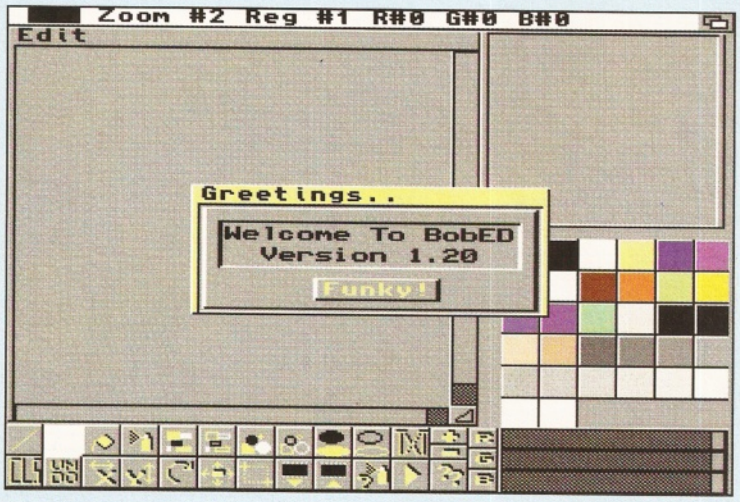


The astute of you will have noticed that our Coverdisk 2 this month contains ImageStudio 2.1 – so what's a review of version 2.0 doing here in the PD section?

Fear not. We haven't gone mad. On the Coverdisk is a version of ImageStudio without some of the restrictions of the PD unregistered version, because it was specially compiled for AS by the authors. The PD unregistered version does have some additional files, though, such as more docs, different processor speed versions, which wouldn't fit on the Coverdisk. For the full package, register!



Do you struggle to complete even the simplest word puzzles? If so, then WordPlus Professional 1.3 is definitely for you (see page 86). It can solve a wide range of word puzzles including anagrams and crosswords.



Create bobs and sprites containing as many as 256 colours with Aspire 2's BobEd editor for Blitz Basic 2 programmers.

85

It's a lot quicker than rendering the same texture over and over again in Imagine, though, so it has its uses. It's not quite the all-singing, all-dancing texture editor we would have liked, however, but it's a step in the right direction.

Rating 75%

WordPlus Pro 1.3

F1 Licenseware

If you're bit of a word puzzle nut then you'll want to get your hands on a copy of this two-disk package from F1 Licenseware. WordPlus Professional is designed to aid the creation and solving of crossword and word search puzzles etc. The program is supplied with a massive 75,000+ word dictionary to search for words when it's trying to solve tricky puzzles.

Being the modest types they are, F1 Licenseware claim that WordPlus Professional is the most powerful program of its type available, either commercially or through the PD libraries.

In particular, F1 Licenseware are particularly proud of the speed at which WordPlus searches its dictionary for words – even on a standard 1Mb A500, WordPlus sprints through at lightning speed.

WordPlus can be used to solve a variety of different word puzzles, including crosswords, anagrams and so on. Solving crossword puzzles is particularly easy as all you need to do is feed WordPlus the letters you know whilst replacing the letters you don't know with question marks.

The program then searches its dictionary for words that match the given search criteria which it then displays. Anagrams are just as easy – simply enter the letters of the anagram and WordPlus displays as many words from its dictionary that it can construct from those that you feed it.

WordPlus also allows you to add words to the dictionary so it can be expanded to handle anything from technical terms to slang and foreign languages.

Selling for £4.99, this two-disk package certainly lives up to F1 Licenseware's claims – it's both easy to use and surprisingly powerful. The ability to expand the program's dictionary is a real boon too. Word puzzle fans should form an orderly queue as soon as possible. This is one program not to miss.

Rating 88%

BobEd 1.2

Aspire 2 Software

Blitz Basic 2 may be the best BASIC programming language since sliced bread, but it does have one major limitation which makes the task of preparing bobs and sprites somewhat awkward – it doesn't have its own dedicated object editor such as the one built into its closest rival, AMOS Professional.

Aspire 2 Software have come to the rescue, however, with its new BobEd utility which itself is programmed in Blitz Basic 2 using the version of Acid's acclaimed programming language provided on the Coverdisk of our sister magazine, Amiga Format (Issue 52).

BobEd may not look particularly special, but it's certainly feature-packed. The most interesting and potentially useful feature of the program is its full support for the AGA chip set built into A1200 and A4000 Amigas.

This enables you to create sprites and bobs containing as many as 256 separate colours – more than enough for even the most demanding of games!

As you'd expect, BobEd provides all the usual bob and sprite editing tools including a full compliment of graphic tools such as freehand drawing, boxes, circles and so on. To help you design animated bobs, BobEd even includes its own simple animation sequencer which can preview your animated objects at any time.

BobEd is available from Aspire 2 for £11.95. For a copy, contact Aspire 2 at Strathspey, Pentre Hill, Flint Mountain, Clwyd CH6 5QN.

Rating 65%

EaglePlayer 1.54

FreeStyle PD

There are plenty of module players available in the Amiga PD libraries, but few are as powerful or as all-encompassing as EaglePlayer from FreeStyle PD. Intended to be as flexible as possible, EaglePlayer was designed from the offset to comfortably play music stored in most Amiga module file formats.

It is not, however, a module editor like Sound Tracker so you cannot use EaglePlayer to edit individual notes or even the samples used within a module. If you do need to edit modules then I can wholeheartedly recommend Teijo Kinnunen's OctaMED.

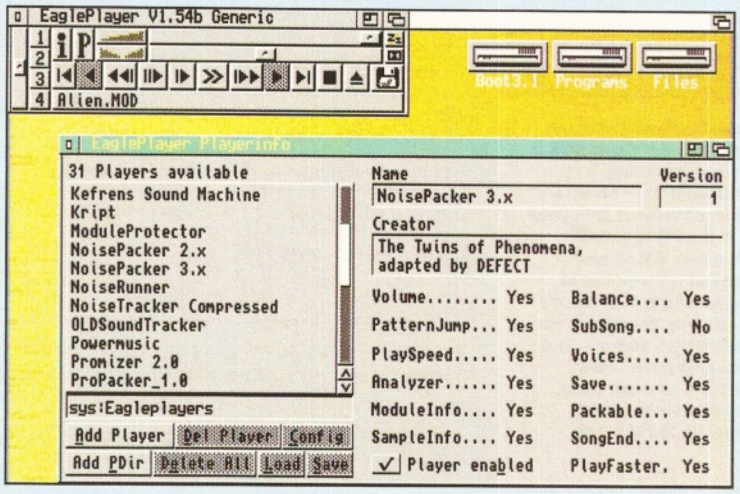
Hard-coded into EaglePlayer is all the code necessary to play Sound Tracker, Noise Tracker, ProTracker, StarTrekker and AudioSculpture. Still not impressed? Well, the great thing about EaglePlayer is its modularity – that is, it can be made to handle other file formats simply by loading additional player modules.

A wide range of additional modules is provided covering more module formats than most of us have had hot dinners – I've never even heard of most of these formats.

When EaglePlayer is first loaded, it displays a fairly minimal window on the Workbench that provides all the usual player controls – Play, Stop, Restart, Rewind, Fast Forward etc. In addition, the second disk contains a massive selection of 'user programs' (program modules) which display your music as it's played in all manner of weird and wonderful ways. There's all the usual favourites – level graphs, monoscopes, pattern scrolls, quadrascopes, stereoscopes, VU meters and so on.

EaglePlayer is a stonkingly powerful utility that should prove useful to all Amiga users, especially those that regularly obtain new modules from PD disks and CD-ROMs. For music lovers everywhere, EaglePlayer is a must.

Rating 78%



Thanks to EaglePlayer's modular design, the program can be extended to handle new module formats simply by loading new player modules.

Chord Directory 2 Professional

F1 Licenseware

Being bit of a musical dunce, I've always wanted to get my hands on a PD program that claims to

89

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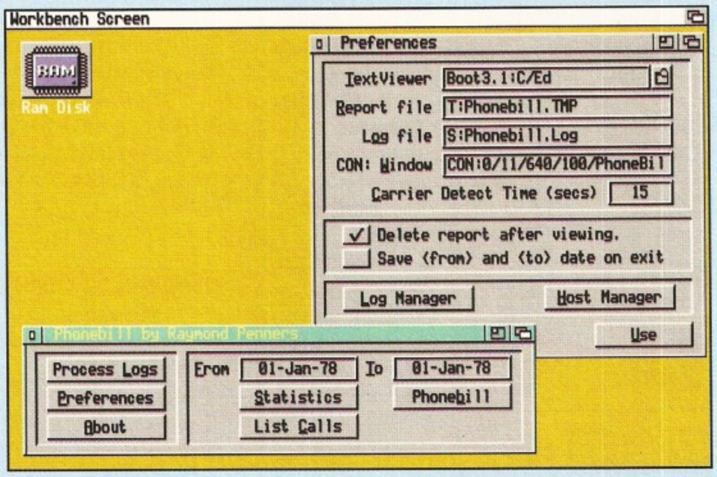
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FreeStyle's PhoneBill utility analyses the logfiles produced by most terminal programs and displays the cost of your modem sessions.

86 improve my musicals skills. Chord Directory 2 Professional is a utility that displays what the author describes as 'chord positions' – that is, where your fingers should be placed on the fret board of a guitar in order to hear a given chord.

My first impression of the program was one of pure bewilderment. Not so much at the program, but at the vast amount of different chords that guitarists are expected to learn – each note seems to have around 20 possible chord variations (there are approximately 276 in total), each of which is displayed in three different positions (there's a total of 1,008 possible combinations!). For each note, the program can display major, minor, major and minor 7, sus 4 (whatever that is!), major and minor 9 and so on.

Being about as musically talented as a tone deaf camel, most of this means absolutely nothing to me, but I'm sure musicians will lap it all up. That said, it's certainly taught me a thing or two and has even tempted me to brush off that old guitar that's been gathering dust in my attic for all those years. Why not give Chord Directory 2 Professional a try yourself – who knows, you could discover talent that you didn't even know existed!

Rating 82%

PhoneBill

FreeStyle PD

Does the size of your telephone bill worry you? If you're a modem user, then you're probably more aware than most just how easy it is to run up a phone bill to rival the national debt. To help you keep a closer eye on your telephone bill, FreeStyle PD have released the catchy-named PhoneBill.

PhoneBill is a logfile analyser. It scans the logfile generated by your terminal program or E-mail utility in an attempt to extract all information about calls that you have made via your modem which it then stores in its own file.

Once it's got these details, PhoneBill then gives you a breakdown of how much each call costs you and how much you can expect to pay out when the chairman of BT decides he wants yet another pay rise er... Sorry, I mean your phonebill arrives.

Rating 80%

Artic

FreeStyle PD

No matter how large your hard drive, you can bet it will fill faster than you could possibly imagine. Fact is, you can never have enough hard disk space. With hard disks still costing an arm and a leg, however, a decent-sized drive still costs more than most of us can afford. To the rescue, however, comes FreeStyle's Artic.

Based upon the popular DriveSpace and Stacker disk compressors so popular on the PC (and Power Computing's DiskExpander), Artic can virtually double the size of your hard drive (its storage capacity that is, not its physical size!).

According to the author, however, Artic is easier, more practical and faster to use. It works somewhat differently to Power Computing's DiskExpander. Unlike DiskExpander, Artic is not an Exec device, but a DOS Handler which uses the standard 'packet' Interface provided by AmigaDOS. So you no longer need to compress an entire disk or partition.

Instead, you can specify a directory on an existing device where you want the compressed files to be placed. This approach is far more flexible because you can specify where on your hard drive files are compressed and where on the same drive (or partition) files are kept in normal, uncompressed format.

Another advantage of Artic is that compressed files are stored as just that – files (and not as tracks) so you can still manipulate your files even if the compression handler is not loaded into memory.

OK, so you won't be able to edit them (unless you decompress them first, that is), but at least you can still get at your files regardless of whether the compression handler is loaded or not.

And, by providing dynamic control over which files are compressed and which are ignored, you can tell Artic to skip files that have already been compressed using a more traditional compression system such as Lha, GIF, Zip etc.

Unlike many other PD Stacker clones, Artic offers a very user-friendly preferences utility called ArticManager which lets you fine-tune how Artic works. You can quickly and easily create, modify, remove and check compressed directories via a friendly Intuition editor. In conclusion, Artic is possibly the best PD disk compressor yet released.

Although it isn't quite as polished as its PC counterparts (or even Power's DiskExpander), Artic is a no-nonsense alternative that gets the job done. Highly recommended.

Rating 82%

Account Master 3

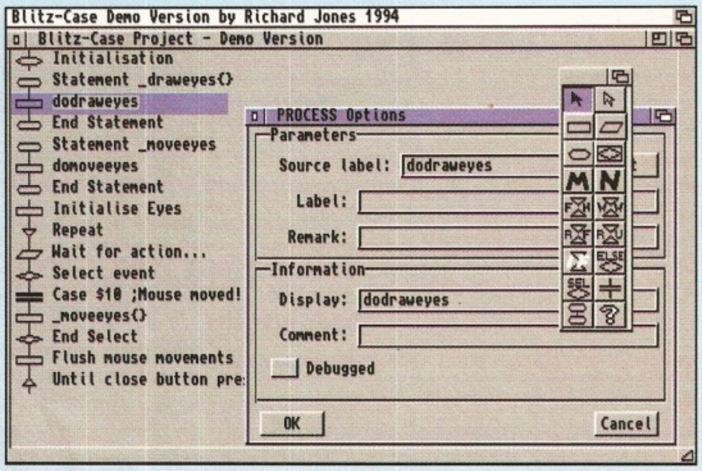
Roberta Smith DTP

They say that a fool and his money are easily parted, which could explain why I'm constantly skint. If you too are fiscally challenged then Account Master 3 could help you. It's a fully integrated home finance program that enables you to easily track your income and expenses so that you can see exactly where all your money is going.

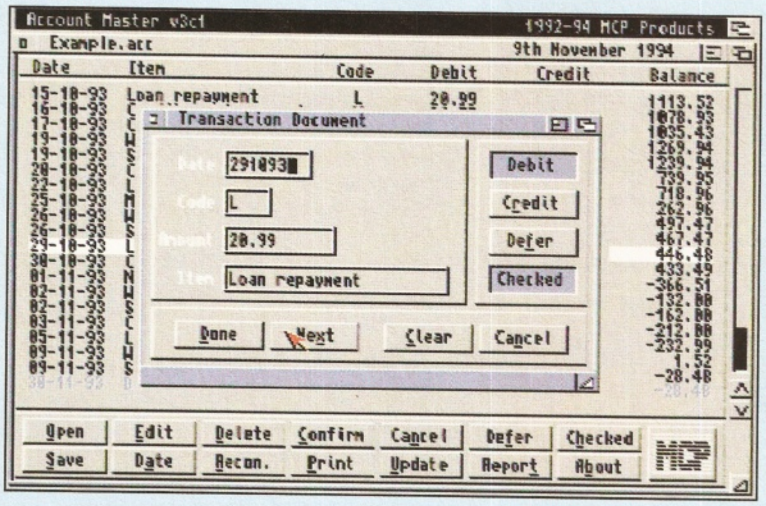
Although it's written entirely in AMOS, the 90



Double the capacity of your hard drive without breaking the bank with the Artic disk compression utility.



Build up the basic structure of your program as a flowchart. Blitz Case (see page 90) can then convert it into Blitz Basic 2 program code.



Account Master 3 is undoubtedly one of the better PD home finance programs available. It can handle up to 1,000 transactions per account and supports an extensive range of graphing options.

89 program uses a fully Workbench 2.0-compliant front end that – whilst it still suffers from the same screen limitations imposed by AMOS's hardware-based screen handling – is still extremely easy to get to grips with.

Like many rival home finance programs, Account Master 3 displays all your transactions (it can handle up to 1,000 transactions per account) as a list not unlike the format used by your bank statement.

Like a bank statement, Account Master displays the amount of each transaction in either the debit or credit columns, depending upon the type of transaction.

Although it does not keep a running balance, you can at least see how much you spend (or paid into your account) on each day. What's more, Account Master 3 offers a comprehensive range of reporting functions which can display the state of your finances in one of several graph formats, including 3D bar charts and balance charts, all of which can be printed to any Preference-supported printer.

Often ignored by cheaper home finance programs, Account Master also supports transaction categories which allow you to group your transactions – food and clothing, entertainment, insurances etc. This feature alone extends the program's usefulness immeasurably because you can see at a glance a breakdown of your monthly budget and act upon it accordingly (in theory, anyway).

You might, for example, be spending too much on entertainment, or perhaps you could spend less on food and clothing (buy cheaper brands, for example). All these decisions are easy when you've got a program like Account Master to advise you.

Account Master 3 is more than qualified to cope with most people's financial tracking needs. It's not quite powerful enough for the self employed (it cannot, for example, track VAT and prepare a VAT return for you) but – for the rest of us at least – Account Master 3 is the best thing since sliced bread. A worthwhile investment.

Rating 92%

Blitz Case

Richard Jones

Coding anything more than a simple demo can be a daunting task unless you're a code wizard. The answer, as many software gurus will tell you, is to plan your program before you commit yourself to code. Most people design their programs using either pseudo code (a mix between BASIC and English), or the more traditional method, flow charts – lists of instructions dictating how the computer will react to certain conditions.

PD author Richard Jones has attempted to make the task of planning your programs far easier with his new Blitz Case utility, a program that he describes as a 'computer aided software engineering' utility.

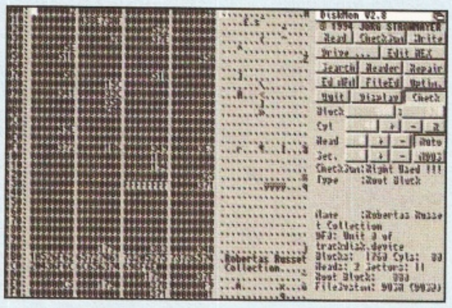
Blitz Case has been designed specifically for use with Acid Software's Blitz Basic 2. The basic theory is that you build up the structure of your program using flow chart symbols. Once the basic outline is complete, all that remains to do is to select the 'Generate Code' option and Blitz Case streams your flow chart out to disk as Blitz Basic 2 code which can be loaded into Blitz and used as the backbone of the rest of your program.

Blitz Case is almost identical to the commercial CASE utility, Fed Case which received a rating of 70 per cent when it was reviewed in our sister magazine, Amiga Format. Although it's not quite as polished and cannot handle anything more than just Blitz code, Blitz Case has real potential.

Like all programs of this type, you still need to be a fairly talented coder to expand the code generated by Blitz Case into a fully working program. Do not assume, therefore, that Blitz Case does all the work for you – sure, it will speed up program development time, but it certainly isn't a replacement for programming talent.

Blitz Case is available direct from the author by sending a cheque or postal order for £1.50 to Richard Jones, 14 Torrington Avenue, Weeping Cross, Stafford ST17 0HZ.

Rating 78%



DiskMon is undoubtedly one of the most powerful disk editor tools available for the Amiga. It includes a built in MFM, File, Track and BAM editor and can even optimise disks for greater performance

Music2Tab Excel 1.61

F1 Licenseware

Guitar fans are being spoilt for choice this month with not one, but two utilities designed to enhance your guitar skills. The first program is Chord Directory 2 Professional (see page 86) and the second one is Music2Tab Excel, a program which converts music displayed in standard musical score notation (sheet music) in to what the author describes as guitar 'tablature' ('Tab' for short), which is a special form of guitar shorthand showing which fret to hold down and which string to pluck in order to play the corresponding note.

Using Music2Tab Excel is very easy indeed and requires little knowledge of either score or tablature notation. You just have to place notes on to an on-screen stave and Music2Tab automatically translates that note into tablature format. What's more, you can tell Music2Tab where on the neck of the guitar you prefer to play and it then calculates the Tab around your preferred fret.

According to the author, Music2Tab Excel can store up to 2,000 notes which can be saved and reloaded. It also supports sharps, flats and natural notes so it can cope with even the most complicated score.

As Keven Hale, the program's author is keen to point out, Music2Tab won't turn you into Eric Clapton overnight, but, with practice, it should improve your familiarity with the fretboard. In all, Music2Tab is a well designed and implemented program that is well worth investigating.

Rating 84%

Roberta's Russet Collection

Roberta Smith DTP

What! Another utility collection? You'd better believe it. The rather strangely-named Roberta's Russet Collection contains no fewer than eight separate utilities covering a wide range of subjects.

Abackup 4.06 – Abackup is a hard disk backup utility that protects your valuable hard disk data in the event of a hard disk crash. It can be used to back up your hard drive and also to archive important data – it can even handle non-AmigaDOS partitions. Boasting a full Intuition Interface, Abackup fully supports commonly available XPK compression libraries.

AutoClone – Fans of West End Game's board game, Paranoia, will find this utility very useful. In a nutshell, AutoClone is a character generator which handles the boring task of calculating the strength, dexterity and so on of your Paranoia characters.

DiskMon – DiskMon is a disk editor which lets you edit the contents of a disk on a track-by-track basis. The program enables you to search, 93

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DiskMon supports Amiga 880k, Amiga 1.71Mb high density, CrossDOS-format and hard disks. Built in to the program are file, MFM and BAM editors as well as a BAD-like disk optimiser.

KeysPlease – This is a simple Workbench utility that displays the current keymap as rawkey, ASCII 7 and ASCII 8 values.

MPEG Interface – It may sound like a hardware project, but MPEG Interface is actually a small utility which adds an Intuition Interface to Michael Van Elst's MPEGPlay program. It allows you to control the different dither/colour settings which are automatically transferred to the CLI-based MPEG viewer. Don't expect MPEGPlay to handle VideoCD movies though – it's designed purely for playing computer animations stored in MPEG format.

SuperMon – This is what hackers call a graphics 'ripper'. That is, it allows you to extract graphics from other programs by ripping them from memory. Although it's a CLI-based program, SuperMon is very easy to use.

StatRAM3 – StatRAM3 is a recoverable RAM disk similar to Commodore's own RAD: device. Unlike RAD:, it's fully dynamic – it does not swallow up an enormous chunk of memory, most of which it does not need. Instead, StatRAM allocates memory dynamically – that is, it only allocates the memory that it needs, leaving the rest free for use by other programs.

ZSpeedUp – This interesting 'patch' program claims to speed up Zmodem transfers down a phone line by as much as 150 per cent. Hmm, I'm not convinced...

Rating 88%

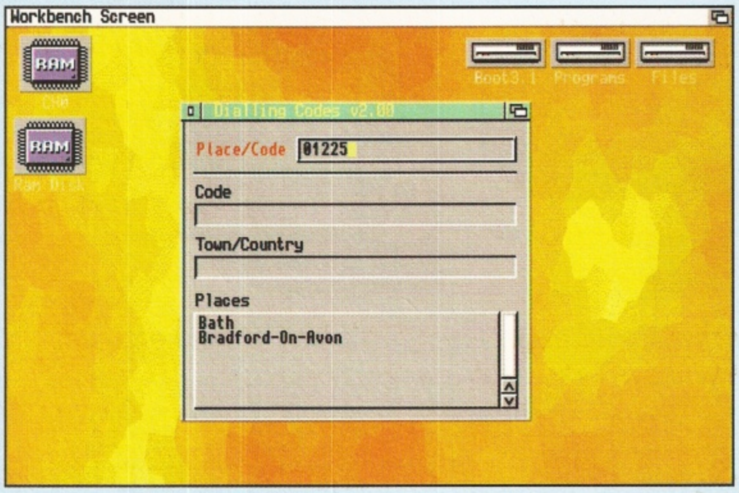
Dialling Codes 2

Julian Wright

PD author Julian Wright was a little dismayed when we listed the PD program ShowSTD in our round-up of the top 100 PD programs a few months ago. "I was very surprised to see that you recommend an out-of-date and limited program," comments Julian in his covering letter.

As you may have guessed, Julian has a program that he thinks is better than our choice – Dialling Codes 2. As its name suggests, Dialling Codes 2 is a utility that deals with BT dialing codes. Like ShowSTD, all you have to do is to feed in either the name of a village, town or city or a valid BT dialing code and Dialling Codes 2 will either display the dialing code for that location or it will tell you the location which corresponds to the dialing code you entered.

Can't remember the dialling code for Bradford on Avon? Simply enter its name into Dialling Codes 2 and you'll know in an instant.



Got it? Although Dialling Codes 2 isn't quite as 'pretty' as ShowSTD (that is, it doesn't show you the location of the village, town or city you entered on a map of England), it does have a number of advantages over its older rival.

For starters, Dialling Codes 2 fully supports the new BT 'Phone Day' codes – 01225 instead of 0225 – and it entails dialing code data for well over 4,000 separate English villages, towns and cities, as well as 170 international dialing codes (including information on the time difference – all important when you're trying to call abroad).

What's more, it doesn't just display a single location for each dialing code – each and every location that the dialing code covers is listed. For those of you who can't spell too well, Dialling Codes 2 doesn't even insist that you enter location names in full – just type the first few letters and it does the rest.

Dialling Codes 2 is a worthy successor to ShowSTD that is an invaluable addition to anyone's Workbench. Best of all, you can get it free of charge. Just send a blank disk plus a stamped, addressed jiffy bag and Julian will send you a copy. Send your jiffy bags to Julian Wright, 21 Dudley Road, Honeybourne, Evesham, Worcestershire WR11 5XR.

Rating 76%

Amiga Music 104

Roberta Smith DTP

Most compilations are simply collections of utilities with very little in common with each other. Roberta Smith DTP's Amiga Music compilation, on the other hand, is what is known as a themed compilation – that is, all the programs in the compilation have a common theme. And, in the case of this compilation, that theme is Amiga music. Here's what's on offer:

Composer – A friendly little music editor that is controlled almost entirely with the mouse. Written completely in AMOS, the program is very similar to Aegis Sonix as it displays your music in score notation.

Note data for each of the four sound channels offered by the Amiga sound chip is displayed on their own separate stave and you can easily add, delete and edit individual notes or groups of notes with the mouse pointer. An, er... interesting program.

Hunter III – One of the best (and most reliable) sound 'ripper' utilities available for the Amiga. It can extract sound samples by searching through RAM after quitting from the program you want to 'rip' from.

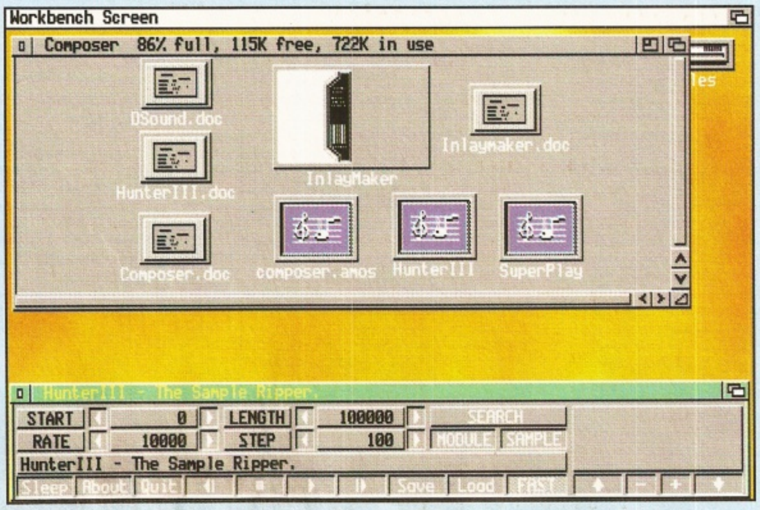
InlayMaker – A utility designed to enable you to produce tidy inlay cards for cassette tapes which you can print on any Preference-supported printer. Type in the title for each side and then enter each track in turn. InlayMaker does the rest. What you end up with is a printed inlay card which you can cut out, fold up and then insert into any cassette case.

Dsound – One of the major limitations of sampling sounds on the Amiga is that the length of your samples is restricted by the amount of memory inside your Amiga. With Dsound you can get over this limitation because it allows you to play back sounds direct from hard disk.

SuperPlay – As its name suggests, SuperPlay is yet another module player. Like most of the competition, it can handle modules stored in a variety of different module formats including all the favourites – Sound Tracker, NoiseTracker, ProTracker etc.

Rating 72% ■ 94

Hunter III enables you to 'rip' samples left in memory by other programs. These samples can be saved off to disk and loaded into any sample editor supporting 8SVX files.



PD houses

This is your truly comprehensive PD house guide.

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Beats Brothers PD, 6 Brownings Close, Pennington, Lymington, Hampshire, SO41 8GX. Specialist areas: Amiga games and utilities. Catalogue £1 inc p&p. Do not accept phone orders, credit cards or direct debit. The catalogue disk will be released in August 1994.

Belshaw's Computers, 55 Balderton Gate, Newark, Notts. ☎ and Fax 01636 72503. Catalogue free. Accept phone orders. Do not accept credit cards or direct debit. Open 9.30am to 5.30pm. Retail outlet, customers can call at shop.

BGPD, 6 Peter Steet, Whitehaven, Cumbria, CA28 7QB. Specialist areas: can supply any title reviewed in any Amiga magazine. The latest Assassin collections. Catalogue 50p or send a blank disk. Do not accept phone orders, credit cards or direct debit. Also many second hand (commercial) games + utilities and a PD document printing service.

Blitz BASIC PD, 39 Riding Dene, Mickley, Northumberland, NE43 7DL. Catalogue is £1.50. Open 9am – 5pm. Orders processed within 48 hrs. Also produce a diskmag for Blitz users.

Chris's PD, 22 Merryfields Avenue, Hockley, Essex, SS5 5AL. ☎ 01702 203826. Chris's PD disk catalogue 60p, 2 disk Fred Fish catalogue £1.10, both Chris's PD & Fred Fish disk catalogues £1.50 or free if you send s.a.e. with sufficient disks. Make cheques and postal orders payable to C. Waite. Open 6pm–8pm weekdays, 2pm–4pm Saturdays. All disks 69p each.

CAM-PD, 26 Crowland Way, North Arbury, Cambridge CB4 2NA.

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CPU Computer PD Library, 120 High Street, Chatham, ME4 4BY. ☎ + Fax: 01634 826 218. Catalogue cost £1. Open 9.30am – 5pm Mon – Sat.

Craig Holmes Non-Profit PD, 23 Rocester Avenue, Wednesfield, Wolverhampton, West Midlands, WV11 3AU. ☎ 01902 305209. Specialist areas: latest virus checkers. Catalogue, free listing upon request. Do not accept phone orders, credit cards or direct debit. Open, mail order only – but phone enquiries 9am – 8pm, 7 days a week. Additional info, all discs £1.75 inc p&p. Bulletin board available on Sunday 2pm – 5pm only.

Deck The Ripper of NFA PD, 173 Trevind Drive, Rushey Mead, Leicester LE4 7TR. ☎ 01162 661 610. NFA productions are setting up a network of PD houses across the UK in an effort to get PD to the public as cheaply as possible.

Epic Marketing, Victoria Centre, 139 Victoria Road, Swindon, Wiltshire, SN2 3BU. ☎ 01793 490988, Fax 01793 514187. Specialists areas, desktop video fonts and tutorials. Catalogue £1. Accept phone orders and credit cards. Open 9.30am – 5.30pm Mon to Sat.

Essex Computer Systems, 15 St Nicholas Road, Tillingham, Southminster, Essex, CMO 7SQ. ☎ 01621 778778. Specialise in Licenceware (central licenceware register C.L.R. organiser). Catalogue free. Phone orders accepted. Accept credit cards/direct debit. Open 10am – 6pm Mon to Fri. Members of the professional standards for software distribution.

Eurodisk PD, 71 Phillimore Place, Radlett, Herts WD7 8NJ. Catalogue cost £1 (free if disk and s.a.e. is enclosed).

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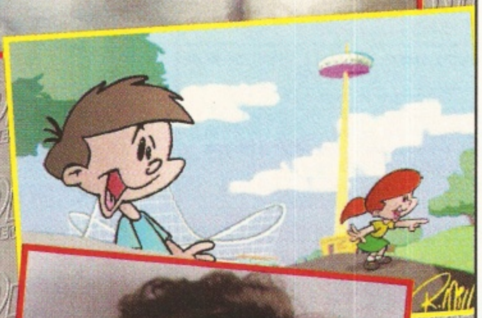
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Contact Les, 28 Congcroft Av., Banstead, Surrey SM7 3AE.
Beccles Waveney Amiga (WAM).
Contact Andrew Rapps ☎ 01502 476 223. 77 Pinewood Gardens, North Cove, Beccles, Suffolk NR34 7PG.
Bedford Nemesis Amiga Group.
Contact Andy Melbourne, ☎ 01234 350654, 126 Mallard Hill, Bedford, MK41 7QT.
Brentwood Brentwood Computer Club
Contact Alan Holland, Sherwood House, Little Highwood Hospital, Geary Drive, Ongar Road, Brentwood, Essex. ☎ 01277 221 620.
Brentwood Hermit Computer Club.
Contact Ann Jones ☎ 01277 218 897. The Hermit, Shenfield Rd., Brentwood, Essex.
Brighton Hanover Computer Club.
Contact Colin Jones ☎ 01273 602834.
Bromley ICPUG South East.
Contact John Bickerstaff ☎ 0181 651 5436.
Bromtard Better Than Life.
Contact Mark Waters, 7 Linton Downs, Brotard, Herefordshire HR7 4QT.
Bury Amiga Group
Contact Chris Skelhorn, c/o Thetford Micros, 7 St John's Street, Bury St Edmunds, Suffolk IP33 1SQ.
Camberley Camberley User Group.
Contact F Wellbelove ☎ 01252 871545.
Cambridge Cambridge Sixty-Eight Group.
Contact EPL Rowell ☎ 01954 210692.
Chesham Beaconsfield and District CC.
Contact Philip Lishman ☎ 01494 782 298.
Clacton Cheapo PD Club.
Contact Jason Meachen, Ivy Cottage, Chapel Road, Beaumont, Clacton, Essex CO16 0AR.
Crawley Yellow And Blue Room.
Contact Malvin Wall, ☎ 01293 534 139. Camfield, Langley Lane, Ifield, Crawley, W. Sussex RH11 0NB.
Corringham Imagine User Group
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Coulsdon The Crumblies.
Contact Frank Barron ☎ 0181 668 7695.
Deal Amiga Club.
Contact Wayne or John ☎ 01304 362297 or ☎ 01304 367 992, 27 Mill Hill, Deal, Kent. Meetings at St Johns Ambulance Hall, Mill Hill, Deal.
Enfield Enfield Amiga Club.
Contact Sean Clifton ☎ 0181 8042867.
Folkestone Amiga 101.
Contact D Cryer ☎ 01303 245 378.
Gerrards Cross Chic Computer Club.
Contact Steve Winter ☎ 01753 884473.
Hastings Computer Club.
Contact ☎ 01424 421480.
Horsham Amiga Zone.
Contact Gareth and Raymond, 7 Swindon Road, Horsham, W. Sussex RH12 2HE.
Ipswich Not the Night.
Contact Andrew, 8 Lanark Road, Ipswich, IP4 3EH.
Leigh-on-Sea Sensible.
Contact M Street, 158 Hadleigh Road, Leigh-on-Sea, Essex SS9 2LP.
Leigh-on-Sea The Swop Shop Club.
Contact Ian Prentice ☎ 01702 710267.
London (Woolwich) Inspira Software Club.
Contact David Cowell ☎ 0181 473 4426, 45 Sandy Hill Rd., Woolwich, London SE18 7BQ.
London (East Ham) Amigaholics Club.
Contact Kevin Bryan ☎ 0171 580 2000 Ext 240.
London (Hampstead Garden) Amiga Club.
Contact Imp ☎ 0181 455 1626.
London (Norbury) Imagine User Group.
Contact Richard Sequeira, 95 Stanford Road, Norbury, London SW16 4PP.
London (Winchmore Hill) Access Information Tech.
Contact Darren ☎ 01956 229729.
London PD for beginners.
Contact M. Macias ☎ 0171/924/5528 before 6pm. 14 Totteridge House, 15 Yelverton Road, London SW11 3QQ.
London Twilight.
Contact 13 Mavis Court, Ravens Close, London NW9 5BH.
Luton Plague Amiga Users Group.
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Contact Richard Brown ☎ 01263 720868.
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Sheringham Professional PD
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Sittingbourne 3D Users Group
Contact Simon Phillips, 43 Harris Gardens, Murston, Sittingbourne, Kent ME10 3PW ☎ 01795 475 505.
Sittingbourne Sittingbourne Co-op Amiga Club.
Contact Andy ☎ 01795 842 608. The Bungalow, Keycol Hill, Newington, Sittingbourne, Kent ME9 8NA. BBS ☎ 0181 905 7002 (data).
Southend-on-Sea Southend Team.
Contact ☎ 01702 333974.
Sutton Agnus.
Contact Philip Worrel, 115 Brocks Drive, North Cheam, Sutton, Surrey SM3 9UW.
Thetford Bizart Diskmag.
Contact Stephen Marghan, Timberton House, The Mount, Buckenham Tofts, Thetford IP26 5HP.
Thornton Heath Amiga BASIC Club.
Contact Imran Ahmad ☎ 0181 689 9102.
Watford Hertfordshire Amiga users Group
Contact keith Alexander 0181 421 1784.
West Watford AmigaSoc. ☎ 01923 248483.
Windlesham Ninja Software PD.
Contact Gary Bowen ☎ 01276 479615, 11 Hutton Close, Thorn-down Lane, Windlesham, Surrey GU20 6DN.
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Worthing Imagine, LightWave, Real 3D objects.
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Yarmouth Robotronix Amiga Club.
Contact P. Symonds ☎ 01493 667161

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Bodmin Amiga Users Klub (Bodmin).
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Bournemouth Amiga Club.
Contact P Chamberlain ☎ 01202 296714.
Bristol Avon Micro Computer Club.
Contact Roger or Bob ☎ or Fax 01179 311642.
Bristol Bristol Amiga Club.
Contact 3 Parkstone Avenue, Horfield BS7 0BX.
Bristol EmuSoft.
Contact Nalpex, 48 Longhandstones, Cadbury Heath, Bristol BS15 5AP.
Charmouth ICPUG
Contact Frank Hancock ☎ 01297 560224 (eve).
Dukinfield C. C. Swapshop.
Contact Tom Hampson ☎ 0161 339 9488.
Exeter Exeter 16-bit User Group.
Contact Andrew Deeley/Phil Treby at 25A Gloucestershire Rd, Exwick, Exeter EX4 2EF.
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Contact Charles Read, 10 The Cedars, Tilehurst, Reading, Berks RG3 6JW.
Redruth Ace Computer Club (ACC)
Contact Adam Scott, Tre Redan, Paynters Lane, Illogan, Redruth, Cornwall TR16 4DS.
Salisbury CHUD.
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Taunton HSPascal User Group
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Contact Sean Woodward. Fido 2:2503/104; 11 Menin Road, Allestree, Derby DE22 2NL.
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Contact Ray Scott ☎ 416 9189.
Whitby WAC (Whitby AMOS Club).
Contact Paul Gumsley ☎ 01947 604 840, 5 Lockton Road, Whitby, North Yorkshire YO24 3NB.

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Contact Bill Grundy ☎ 01254 385365.
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☎ 01253 724607.
Macclesfield Computer Club.
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Neath Amiga Navigation.
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Special interests

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Contact Gavin Wylie, Guthrie Street, Carnoustie, Angus.
Basingstoke AMOS Programmers Exchange.
Contact J Lanng, 7 Majestic Rd, Hatch Warren, Basingstoke, Hants RG22 4XD.
Braunston Fen Amiga Boatowners.
Contact D Beet Lock, Branston Fen, Lincolnshire LN3 5UN.
Braunston Nr Daventry GFA Basic Forum.
Contact J Findlay ☎ 01788 891197.
Braunston Nr Daventry Amiga E Support Group.
Contact John Findlay ☎ 01788 891197.
Broadstairs AMOS Programmer Club.
Contact Gareth Downes-Powell, 6 Brassey Avenue, Broadstairs, Kent CT10 2DS.
Bury St Edmunds Amiga Sports Fans.
Contact Jamie Last, York House, Church Road, Elmswell, Bury St Edmunds, Suffolk IP30 9DY.
Chelmsford ICPUG
Contact David Elliott ☎ 01245 328 737.
Corringham Imagine User Group
Contact Spencer Jarvis ☎ 01375 670036. 44 Brampton Close, Corringham, Essex SS17 7NR.
Dewsbury Ethos BBS.
Contact Steve Bell ☎ 01924 437258, 909 Leeds Rd., Chidswell, Dewsbury, West Yorkshire.
Durham Under 18 PD User Group (JB's PD).
Contact J Blackburn, Longridge, Potters Bank, Durham DH1 3RR.
Glasgow 24-Bit Club.
Contact Gordon Keenan, 24-Bit Club, 6 Skirsa Square, Floor 1, Glasgow.
Haddington Heart of Lothian BBS
Contact Andrew Dowds
☎ 01620 826111/6004.
Highfields CDTV User Group.
Contact Gary Ogden, ☎ 01785 227059.
Huddersfield Third Dimension -3D Construction Kit Users.
Contact Tony Hartley ☎ 01484 460888, 19 Kipling Close, Lockwood, Huddersfield, West Yorkshire MD4 5HA.
Isle of White Interactive Design
Contact David Pettifer/Matt Parsons
☎ 01983 867377 after 5pm. 22 Brook Rd., Shanklin, Isle of White PO37 7LU.
Lingfield In Touch Amiga.
Contact P. Allen, ☎ 01342 835530, PO Box 21, Lingfield, Surrey RH7 6YJ.
London (Richmond) Micro Academy.
Contact Don Pavey ☎ 0181 878 1075.
London Walton's Mountain (BBS) Virtually Amiga specific.
Contact Jimbob ☎ 0181 891 5730.
London ICPUG.
Contact the Membership Secretary. Fax 0181 651 3428. ☎ 0181 651 5436.
Lothian ICPUG.
Contact David Hope ☎ 01555 811 955.
Macclesfield ICPUG.
Contact Peter Richardson ☎ 01298 23644.
Maidenhead ICPUG.
Contact Mike Hatt
☎ 01753 645 728 (8pm–10pm).
Manchester CDTV Users Club.
Contact Julian Lavanini, 113 Fouracres Rd, Newall Green, Manchester M23 8ES.
New Whittington Digital Music Club.
Contact Roger Hunt ☎ 01246 454280.
Normanton BASIC Programmers' Group.
Contact Mark Blackall ☎ 01924 892106.
Rochford Ray Tracers.
Contact Neil Hallam, 12 Meesons Mead, Rochford, Essex SS4 1RN.
Romford Phoenix Demo.
Contact Frank ☎ 0181 597 4661.
Rotherham Marksman (Trojan Phazer).
Contact David Green, 67 Thicket Drive, Maltby, Rotherham, S. Yorkshire S66 7LB.
Scotland Quadrant BBS
Contact Chris Bruce (Sparky)
☎ 01289 331822.
Solent ICPUG.
Contact Anthony Dimmer
☎ 01705 254969.
Swindon Amiga Video Producers' Group.
Contact J Strutton
☎ 01793 870667 (–9pm).
Swindon MUG – MED Users Group.
Contact Richard Bannister, 6 Glevum Rd, Stratton St Margaret, Swindon SN3 4AF.
Taunton HSPascal User Group
Contact T. Long, 13 Longmead Close, Taunton, Somerset TA1 4SZ.
Wallington Bible Bureau.
Contact AD ☎ 0181 669 7485.
Ware Gamer-Link.
Contact Stu, 28 Churchfield, Ware, SG12 0EP.
Witham Video Visuals.
Contact Chris Brown, 4 Lavender Close, Witham, Essex CM8 2YG.
Workington AMOS Programmers Group.
Contact John Mullen at 62 Lonsdale St, Workington, Cumbria CA14 2YD.
Worlingham Sliver BBS
Online all cheap rates.
Contact Mat Tillet ☎ 01502 714 663, 27 Hillside Avenue, Worlingham, Beccles NR34 7AJ.

Overseas

Australia Southern Suburbs Commodore Users Group.
Contact Steve Perry, P. O. Box 217, Beverley Hills 2209, Sydney, N. S. W. Australia.
Australia Amiga Users Group of Western Australia.
Contact Bill Sharpe-Smith, PO Box 595, Cloverdale WA 6105, Australia.
AustraliaCanberra Amiga Users Society
Contact Brian Hancock, 11 Nerli Place, Conder, Canberra, Act, Australia 2906.
☎ 06 294 1615.
Australia Comp-U-Pal.
Contact Comp-U-Pal, 116 Macarthur Street, Sale, Victoria 3850, Australia.
Belgium AUGFL vzw.
Contact Lieven Lema, Meesberg 13, 3220 Holsbeek, Belgium.
Cape Town ICPUG
Contact Ken Turner ☎ +507 5131. Internet: kturner@aztec.co.za. 24 Du Plessis Avenue, Edgemead, 7441, Cape Town, S. Africa.
Denmark Danish AMOS User Group.
Contact Tom Poulsen, DABG, Postbox 127, 2640 Hedehusene, DK Denmark.
France Interceptor (Public Domain Software).
Contact Interceptor, 13 Avenue Jean Jaures, 73000 Chambery, France.
France 16-32 Micro.
Contact F Moreau, 132 Rue Jean Follain, 50000 Saint-Lo, France ☎ 315220 02.
France Maritime Amiga Club.
Contact CDR K Osei, GN Ships Refit Office, 51 Rue de la Bretonniere, 50105 Cherbourg, France.☎ 33 33225447.
Germany Royal Air Force Amiga Club.
Contact Stan Young, HMF RAF Laarbruch, BFPO 43.
Germany Worldwide PD Club.
Contact Dave White, Berliner Strasse 39, 40880 Ratingen, Germany
☎ 02102 499729 (Germany).
Greece Amiga Pros User Group (member GAC)
Contact Stefanos Siopoulo
☎ 01 9349963.
52 Silvrias Str, N. Smyrni 171 23, Athens, Greece.
Greece Amiga Athens Club.
Contact Stefanos Papamichael, 9 Derfeld Rd, Patisia, 11144 Athens, Greece
☎ 01/2027973.
India Indian Amiga Friends.
Contact Bilal, 46 Paragon 405 Lokhandwaza Complex, Andheri (W), Bombay-400058, India.
Iran Palapal
Contact Paymddn Jafari, PO Box 17845-343, Teheran, Iran, or, No. 26, 32 St., Moslem St., Abouzar Blvd., Pirouzi St., Teheran, Iran. ☎ (Iran) 021 315 3445.
Ireland Amiga Addicts.
Contact A Minnock, Clonkelly, Binn, Co Offaly, Ireland (send s.a.e.).
Ireland AMOS Users.
Contact Brian Bell, 8 Magnolia Park, Dunmurry, Belfast BT17 0DS.
Ireland City Centre Amiga Group.
Contact Patrick Chapman, 70 Ballygall Crescent, Finglas East, Dublin 2, Ireland, ☎ 345035.
Ireland Commodore Users Group of Ireland.
Contact Geoffrey Reeves, c/o St Andrew's College, Booter-stown Avenue, Blackrock, Co Dublin. ☎ +353 1 288 3863.
Ireland Navan Computer Club.
Contact Mark Arnold, Cannistown, Navan, Co Meath, Eire ☎ 046 21078.
Ireland Northside Amiga Group.
Contact William Kelling, 10/A Rainsford Avenue, Dublin 8, Ireland ☎ 01 532 807.
Ireland Software Exchange Club.
Contact Michael Lacey, Fern's Post Office, Enniscorthy, Co. Wexford, Republic of Ireland.
Italy Amiga Expert Team/Uniware
Contact Mirko Lalli, Via Vecchia Aretina 64, I-52020 Montalto, Pergine Valdarno (Arezzo), Italy. ☎ +39 575 899 798 (for Fax, voice request).
Italy Amiga Jewels
Contact PO Box 6, 57027, San Vincenzo, Italy.
Malta HTS (Malta).
Contact K Cassar, Block 1 Flat, 6 H E Hal-Tmiem, Zejtun ZTN07 Malta
☎ 674023.
Malta Malta Amiga Club.
Contact Zappor, PO Box 39, St Julians, Malta. ☎ 440453
Norway '94 Amiga Club Norway
Contact Mats Lindh, Elvensveien 22, N-1666 Rolsvoey, Norway.
Portugal Centro Amiga/Via Lactea BBS.
Contact Rui Costa, 351 01 888 2245/49, Largo do Martim Moniz-C,C, Mouraria, 1 loja 408-1100 Lisbon, Portugal.
Portugal Software Asylum.
Contact Sid Sanches, Portugal
☎ 062 831566. Apartado 6156, 3000 Coimbra, Portugal.
Singapore Singapore Sling.
Contact Eric Chai ML, Block 4 #14-413, Pandan Valley, Singapore 2159,
☎ 65 4680630.
South Africa Amiga Users Exchange
Contact Ken Turner, 24 Du Plessis Avenue, Edgemead, 7441 Cape Town, S. Africa. Internet: kturner@aztec.co.za.
Spain Inforadio AC. (Infografia)
Contact Jose Manuel, Martin Sanyos
☎ (Spain) 969 227 909. Apartado de Correos, 1036 Castellon, 12005 Spain.
Spain Amiga Aga Exchange (España).
Contact S I Steele, Calle Ribadavia, 16-8-1, Madrid, Espana 28029. In English only please.
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Sweden Amiga UserGroup Sweden
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Sweden 32-bit Ware.
Contact 32-bit Ware, Ekorrstigen 10, 147 63 Tumba, Sweden
Switzerland Amiga User Group Switzerland.
Contact AUGS ☎ ++41 34 45 3078. Bahnhofstr. 7, CH-3426 Aefligen, Switzerland. BBS: +41 (0) 62 44 32 27.
USA Japan Amiga Group.
Contact : Rick Gardaya, PSC 78, Box 3876, APO AP 96326 USA. ■

It is Amiga Shopper's aim to list every Amiga user group in the world on these pages, so if your group is missing, please fill in and send the form below to:

User Groups, Amiga Shopper, 30 Monmouth St., Bath BA1 2BW.

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Talking shop

This month in Talking Shop: advice for Escom; more music please; PC, or not PC?; and the cover price is spot on.

Another month and another load of your letters have arrived on my desk. We haven't got enough room to put them all in, but here's a selection of the best. The Star letter of each month receives £25 for the writer.

Positively happy

£25 Winner

I am writing to congratulate you on the best Amiga Shopper to date. The difference with the August '95 issue is astonishing. It is a very good idea to split the disks into various zones – something for everyone. I particularly like the additional Shell commands, the Icon-editing utilities and ShowObj.

I was disappointed that the ARexx tutorial only lasted for one month though, I suppose I will have to buy Toby Simpson's book now. The Photogenics tutorials on the other hand have been very enlightening.

I have learned a lot over the past few months. I have also gained from reading Larry Hickmott's Wordworth Companion book, there are lots of good ideas within. On this note, would there be any chance of a companion guide being produced for Photogenics, to complement the AS tutorials and the manual?

Graeme Mathieson
Bangor, Gwynedd

Thanks for your comments, Graeme. We have lots of ideas for tutorials that we want to run in Amiga Shopper, but we can't fill the magazine just with them, so we decided to run an ARexx feature instead. Watch out for our new DTP tutorial in the next issue and we have a few more ideas up our sleeves for when the present lot of tutorials end.

Our Graeme will be pleased that you've found his Photogenics tutorials useful. Next month we have the last in the series which will be written by none other than Paul Nolan, the creator of Photogenics himself. I will pass your idea for a companion book for Photogenics to our Books division (see page 82).

Advice for Escom

While it is good news that the Amiga has at last come out of limbo (having been finally bought by German company Escom), I have some fears which I would like to voice:

1. Once Escom begin producing the A1200 again, I hope that they will take their time to do so instead of just rushing it out. After all, look what happened when Sir Clive Sinclair attempted to meet demand with his Spectrum in the 1980s – they were not even tested before hitting the shelves and consequently many machines included serious faults.
2. Will many of the software developers who decided to quit the Amiga when they believed it to be a lost cause actually come back to it again? Some of them seem to have made up their minds already and just don't give a damn about the A1200's future any more.
3. How can we be sure that Escom don't make the same mistakes as Commodore did as regards the launching of new machines and keeping its customers informed? I hope that they do not intend to blitz the market with a fleet of 'super machines' as a more sensible option would be just to create one and let it be the basis of all future developments. The original A500 is a prime example of this and even today it is still a grand machine – I know, for a friend of mine still has one!
4. Do Escom intend to fully support the Amiga with a vigorous advertising campaign and perhaps show it also as a 'serious' machine and not just something for the kids to play on?

David O'Connor
Dinnington, South Yorkshire

I will answer all your questions together, if that's OK. Firstly, we believe that Escom are taking their time with the production of the A1200s – they are certainly aware of the mistakes that Commodore made with their rather strange policy of launching new machines, so they're going into the market with their eyes wide open.

And once A1200s are back on the streets, I am confident that software developers will return to the platform and start producing Amiga programs again.

Basically, all the discussions we have had with Escom and Amiga Technologies have been extremely positive so far. You only have to read our report of the press conference Escom held recently in Frankfurt (in issue 52) on the future of the Amiga to realise that they are very impressed with the Amiga technology and they are committed to marketing the Amiga as a multimedia machine. Turn to page 14 where we have another news story updating you on the latest developments.

The price is right

So a couple of months have now gone by with the appearance of the new Shopper, and I have nothing to say about the new look – except, that is, I like it, but I fail to see what some people are complaining about.

The price of £3.99 for an Amiga Shopper – I would pay double that and, as a matter of fact, I *used* to pay double – £7 plus here in Switzerland. So I suggest all those silly buggers in the UK should pay the £3.99 and keep their mouths' shut. I also buy three German mags and two of those cost £4.05 each without Coverdisks. So all you lucky buggers in England pay your £3.99 and be happy.

David Coutts
Aargau, Switzerland

So there!

Making music

Would it be possible to do a round-up of MIDI synths/keyboards while you are covering music programs? I know the products would not be Amiga-specific but I think this is an important area which I have never seen covered by an Amiga magazine before.

I am looking to spend about £700-£800 (but possibly a bit more) on a synth with the following capabilites:

- General MIDI compatibility.
- 16/32-note polyphony (32 notes of same instrument simultaneously?).
- 32-instrument multi-timbral (32 different instruments simultaneously?).
- A good selection of sounds (especially dance/house style), including percussion.
- Built-in speakers, preferably.

As a newcomer to the world of keyboards (but an experienced pianist) I am a bit unsure of the jargon etc. involved. I would be grateful for any advice on this subject.

Darren Jones
E-mail

In our next issue of AS the Supertest will be all about music hardware and software for the Amiga. But, as you say, we are an Amiga-specific magazine and I don't think the majority of our readers would be interested in a Supertest of just keyboards. (Please write in and correct me, if I'm wrong.)

You are more likely to find reviews of keyboards and MIDI synths in our sister magazine, Future Music. Try calling them, or writing to them, to ask for the advice you need.

Writing with disappoint

I'm an Italian happy subscriber since two years ago, I've always appreciated this wonderful and professional Amiga Shopper. But now I must write you a great disappoint: the new disks arrangement found on issue 52. This new way is too much complicated and won't let you simply

go inside the floppy and look for what you prefer. I'm an old Amiga user and I hate all this /events-completely-driven-by-someone-else/! I like to simply have all the original archives so I can look inside them immediately without having to reboot my Amiga a thousand times. :-)

Well, this is just my opinion but I prefer to have disks *not* autoboot and with just the original archives inside.

Ciao, (= bye in Italian...)

Gian Maria Calzolari
E-mail

Er, right. Well, the idea behind using the zones was to make it easier for you to find stuff you like, not harder. Since you E-mailed us, I'll assume you have a hard drive, so why don't you install to that in a temp directory? It takes a couple of minutes to install the whole lot and you can then sift through them.

As you'll be happy to see this month, I've stopped the double archiving, so you can look directly into the contents of the archive, which have programs batched together for reasons of speed, ease of de-archiving and archive efficiency. There's no difference between that and using the original Lha archives, except that you get loads more.

Bye, (= ciao in English...) ***David***

Going into overdrive

I am a little bit confused about the way you use LZX. I am the owner of an Overdrive HD and I can't access my drive if there isn't a Workbench interface for LZX. I spend 30 minutes unpacking it on to eight disks. That wouldn't be necessary if you thought about us with an Overdrive. You don't have to make them bootable, if not there would be more space for great programs.

What I want to see on a future Coverdisk is DiskCat, so I can make my own catalogue.

Ove Liljegren
Sweden

I don't think that there are that many Overdrive users, certainly not when compared to users with internal hard drives. You're quite right – installation to hard drives doesn't work for drives that need separate devices to access them. Sorry that the Overdrive uses the PCMCIA slot and needs a separate driver, but we can't cater for every possibility like that.

The solution is quite easy for you, though. Don't boot the Coverdisks, boot your hard drive. Then de-archive the archives manually or using a File utility like Directory Opus. Then you can do it straight to your hard drive.

If you want some help with the syntax of LZX to de-archive manually from a CLI, let us know (although you only really need to type: AS_0995_1:c/lzx_68000ec x AS_0995_1:archives/as1.lzx <destination>). That's not so bad, is it? After all, the disks are made to be as easy to use as possible so as to help out those less able and still learning about their computer.

You want a disk cataloguer? So you didn't notice the exlusive AS version of TurboCat 3 that was in last month's Application Zone on the disks? ***David***

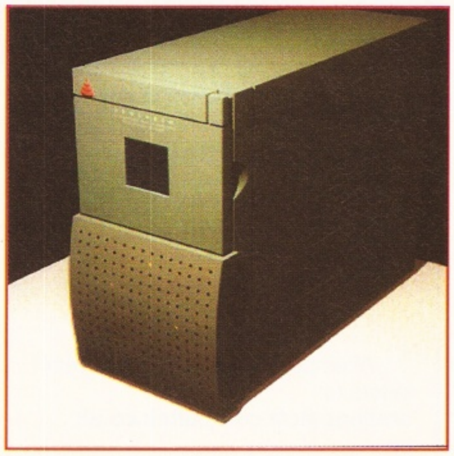
PC, or not PC?

Whilst reading through several back issues of Amiga Shopper, I decided to write with my opinions of current Amiga-related issues. I, like most readers, am glad that Commodore/Amiga has been bought and I am equally pleased that Escom are the proud new owners. I feel their interest in the Amiga technology and their financial backing will push the Amiga back up where it belongs.

I must also admit that I'm glad Escom have decided against releasing an 'Amiga on a card' for them there PC things as I can't see how it would help! It may make a few indecisive PC owners buy Amigas, but ultimately, it would just drive Amiga developers to write software for the PC, as it would give them a much larger market and still allow them to claim they're backing the Amiga.

The same goes for making the next generation of Amigas PC-compatible. Why write for the Amiga when both Amiga users and PC users could use the same software? If this happened we would have to pay the same pathetic prices that PC users are subjected to, and as for running Windows NT as its primary OS...

Amiga owners have had a far greater love of their machine. I've never known someone to buy a PC because they enjoy using computers, and having used Windows quite extensively, it would take a sadistic git to do so. This attitude could be directly credited for the Amiga weathering the last year's problems and to become another PC clone would destroy everything that the Amiga used to be.



This could be the new design of the A4000T.

Being a programmer I am very specific about what I'll use and I would rather be stabbed to death with a toothpick than program for another machine. But for the Amiga to gain back its popularity development has to occur.

The Amiga, courtesy of a very drawn-out legal matter, is now far behind the competition. The AAA Chipset when announced could have shattered the Earth, now it is still very advanced and with the addition of 3D rendering hardware could beat any currently available machine.

The Sony PlayStation and Sega Saturn are excellent machines, temporarily hindered by unoriginal and, well, cheesy software, coupled with prices above what the public are willing to pay, but these problems will soon change, so new Amigas need to be developed soon!

I personally can't understand why Amiga International don't work on coupling the existing AAA chips with a low-cost RISC chip and a 3D rendering chip, this would cost less and take less time than developing a completely new system as most of the technology exists, it's just a case of getting them to play nicely.

Scrapping the AAA could have been the worst choice the old Commodore made. Up-specced, low-priced A1200/A1300s and A4000Ts could be a great idea, but Escom have just announced new Amiga computers at the start of next year, surely not a wise move, but more honest than the old owners.

People waiting for the new Amigas will know to wait two months longer instead of buying an A1200. We all know how badly burned people felt having bought an A500+ just to see it superceded before they got the bloody thing home.

I am also glad to see the new company heading for the high-end market as a machine with the Amiga's abilities deserves to lead that particular field. The introduction of new A4000Ts is a step down that path, but who the hell designed the green case?

James K. Andrews
Kirkcudbright

Are you listening, Escom?

Agreeing with Gordon

I agree with the sentiments expressed by Gordon C Tuckner in Talking Shop AS issue 51, and feel that Amiga Shopper was, in its earlier

▶ 102

Subjects of interest

£25 Winner

We want you to write in to Talking Shop to tell us which 10 Amiga-related articles you would like to see featured in Amiga Shopper.

AS is, after all, *your* magazine and for us to keep giving you all the information you want we need you to tell us what else you are looking for. It could be an interview with an industry figure, a Supertest of monitors, a tutorial on a particular program or a review of a certain product that we haven't done. We can't promise that everyone's ideas will be used, but if several people ask for the same feature, then we will act upon it.

Or you could just write to us and tell us what you think of Escom's plans for your machine and how you think they should be developing Amiga technology.

And remember that the Star letter of the month wins the writer £25.

Send your 10 ideas in to:
Talking Shop, Amiga Shopper,
30 Monmouth Street, Bath BA1 2BW.

Write to **Talking Shop**

To add your contribution to any of the debates going on on the Talking Shop pages, send your letters to:

Talking Shop,
Amiga Shopper,
Future Publishing,
30 Monmouth Street,
Bath BA1 2BW.

Alternatively, you can E-mail your letters to:
amshop@cix.compulink.co.uk
or:
sgrant@futurenet.co.uk
All letters received at these addresses will be considered for publication, unless you specifically advise us otherwise.

101 day before the disks and glossy colour presentation, a much better magazine. It is becoming another Amiga Format or Amiga Computing, etc.

Like Gordon, I too am the owner of a humble A500 with Workbench 1.3.2 Rev 34.28, with the following additions: GVP 40Mb hard drive and a total of 5Mb RAM, and I mourn the day that all the changes occurred in the name of advancement.

I do not decry advancement. I feel that it happened too quickly and was one of the prime causes for the collapse of Commodore and the state it is in at the moment. Let us hope that Escom do the business and allow the Amiga in whatever guise to rise again with full support for all models passed and present.

In answer to Gordon's problems – I have a copy of AS issue 27 which he is welcome to borrow. Further, Power Computing Ltd., the address of whom is on the inside back cover of issue 51, still have on offer the original Commodore Workbench 2.05 upgrade plus ROM Switcher if so desired. So dual operation is still available for those who are reluctant to or cannot afford a major change of machines.

Martin Davies
Kent

If Amiga Shopper had stayed in the format it was in before the relaunch of March 1995, you may not have been reading these pages now.

The fact that we redesigned the magazine and introduced two Coverdisks on the front every month has meant that we have happily retained our position of market leader in the competitive magazine market, largely unaffected by the troubles of the Amiga over the past year. We are, in fact, going from strength to strength.

Support network

Thank you for continuing to actively support Amiga during a truly trying year.

Congratulations on not only doing this but substantially improving your magazine during that year. I look forward to each issue. Fortunately, our confidence here has been as strong and through our Amiga Club we have survived and prospered Amiga-wise.

We look forward to Escom sharing our enthusiasm for Amiga.

Jim Mason
North Shore (N.Z.) Amiga Club,
North Shore City, New Zealand

Thanks for your comments, Jim.

Born in the USA

I am an avid Shopper fan from issue 1. Great magazine. But since I'm here in the USA I sometimes feel that reviews don't cover issues relevant to American Amigans. An example would be whether PD reviewed works in NTSC, with 040 accelerators, non-AGA but Spectrum emulations, or variations of those themes.

I bought Datastore because of your review only to discover it wouldn't play on my Spectrum workbench. Overall, though, keep up the good work and don't sell out.

Anon
E-mail

As we are a British-based magazine, we do tend to cater for those readers first. Having said that we welcome overseas readers and are pleased to report that we have a strong following overseas (you just have to take a look at these letters pages to see that we have a worldwide readership).

However, your comments have been noted and we'll see what we can do to improve the information we provide.

Put to the test

It would be a good idea if you tested the software on a wide range of machines before you state that it works on them. I talk about the Bartender program which you gave away with the last issue of the mag. [AS50.]

Previously I was running Workbench 2.04, so I thought it would work. I dearchived the program and double-clicked on the icon... Nothing happened. In the mag it said Workbench 2+ required, so I thought I'd be OK.

Last week I got the Workbench 3.1 set, installed it and when I was playing about with it I clicked on the Bartender icon. To my amazement, it worked. Now, I buy AS every month, and so far I've had no complaint about it, but this really annoyed me.

Stuart Grier

We always test the software we put on our Coverdisks thoroughly to make sure they work on most machines. You may have had a missing library or system file which would have been installed automatically with Workbench 3.1. ■

Advertisers' index

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AMOS professional

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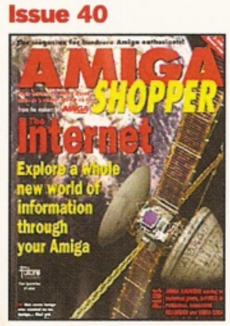
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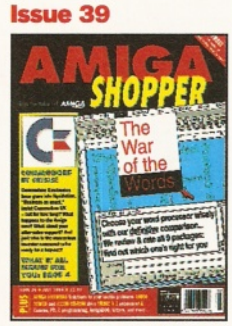
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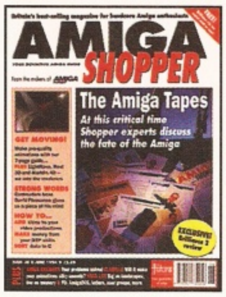
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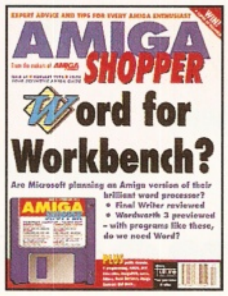
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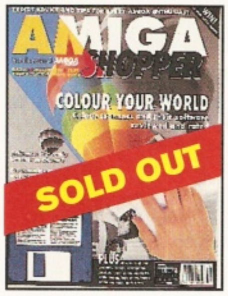
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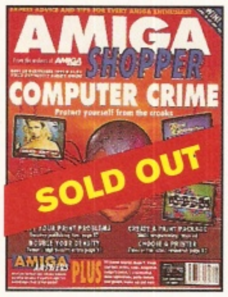
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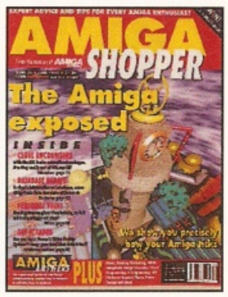
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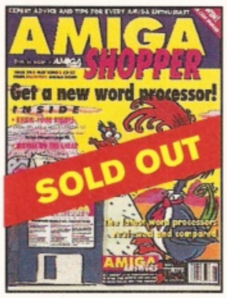
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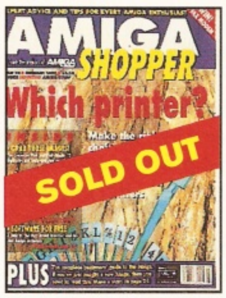
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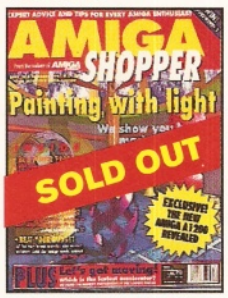
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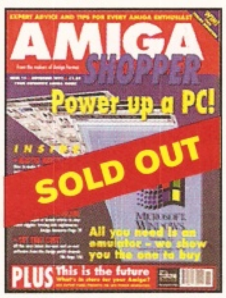
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AMIGA SHOPPER

Next **month**



Supertest: Making music with your Amiga

Following on from our music feature this month (see page 18), John Kennedy is in the process of writing a huge music software and hardware Supertest for next month. So, if you've read our feature and it has inspired you to try your hand at recording your own stuff and getting it produced professionally, then read the Supertest next issue, where you'll find advice on what you need to achieve great results using your Amiga.

Tutorials

Next month heralds the first instalment of our new six-part DTP tutorial. We've asked Larry Hickmott to tell us all about his DTP set-up and explain why he chose the hardware that he uses for his own business.

Paul Nolan, the creator of Photogenics, writes the final part of our Photogenics tutorial. Plus more on Comms and DICE.

PLUS!

A whole host of in-depth reviews of brand new Amiga hardware and software; the latest news from the Amiga scene; all your Amiga-related problems solved by our experts in Amiga Answers; new-on-the-market Public Domain programs reviewed and rated; buy and sell in our FREE Reader Ads; and have your say in Talking Shop.

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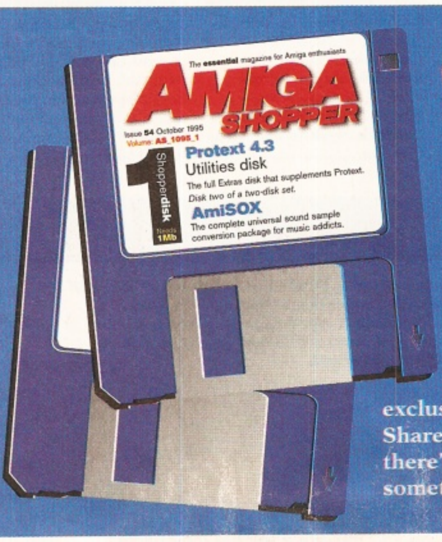
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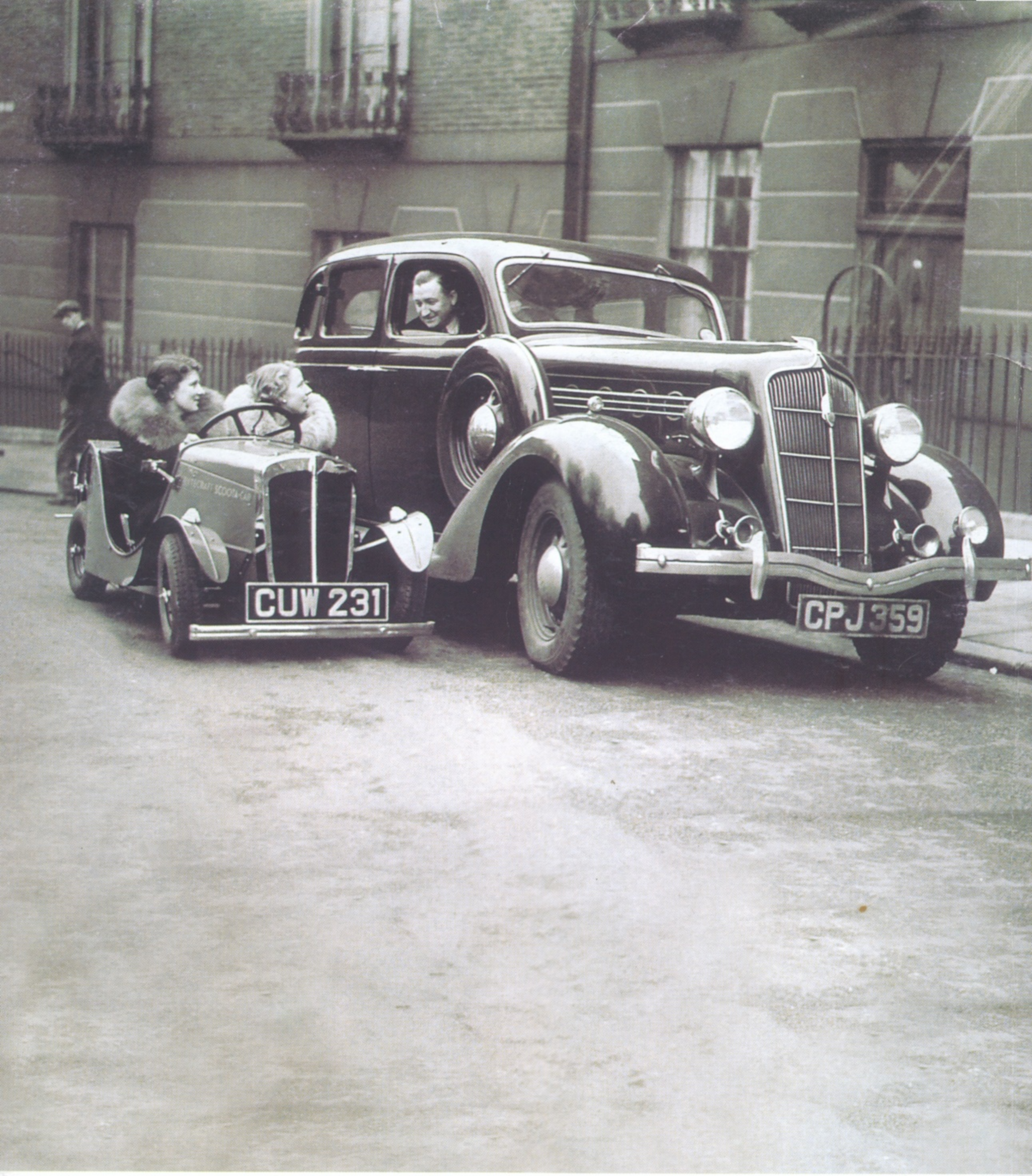
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Pic: Hulton Deutsch

Man: "I say, ladies! Isn't it about time you upgraded to Workbench 2?"

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